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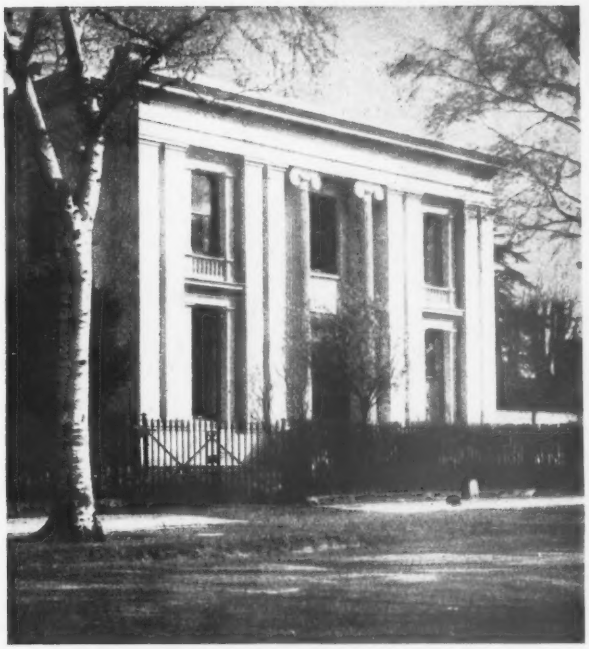

Lake House, Pittville, Cheltenham. A photograph by D. I. Stratton Davis from his Final Examination thesis on the Regency Architecture of Cheltenham. Awarded Distinction.

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Journal

This time a year ago we were publishing the last of our peace-time journals—fifty-four pages on housing in Sweden, camps for peace or war, book reviews closing a rich publishing year—all about art, progress and peaceful affairs. Too peaceful much of it was, not because the war that was coming on us was not evident, but because those studies lacked direction or any real fighting will to make the changes which our arguments showed to be needed, or will to carry our arguments to the point where the necessity for action became so evident that it could not be denied.

In the last few months there has been a remarkable stirring of thought. Planning councils, research bodies, personal and public enquiries in many other spheres besides our own have been directing their thought to the planning problems posed by the war. The central problem —What place will this after-war Britain be ?—for us must be resolved into terms more obviously related to the direct problem which we have—What sort of architects will the after-war Britain want ? And then, what part can the architects now play in making an after-war Britain where a full life may be lived ?

All this might seem nostalgic, pie-in-the-sky stuff, were these problems not so urgent and real. The distant view is part of the same picture as the foreground. What we do *now* with our service in the war, about a Building Ministry, about improving the technical competence of the profession, about the structure and powers of the industry, about research, will control what we can do later.

Few people seriously picture the world which we are fighting Fascism to create as being just the old world that let Fascism grow. We can take, as architects, the positive view that, as architects, we have a share in creating it, but this means the simultaneous creation of ourselves into a living unit of the new world. We can't stand still and look on and hope to " get in on the ground floor." The Research Board, the Architectural Science Group, the new " 1940 Council " which was established at a conference convened by the Housing Centre at the R.I.B.A. in February, are some of the organisations directly concerning themselves with this. The men who are working at any of the jobs associated with war building are themselves helping to create a new kind of architect. The JOURNAL, even in its reduced form, can do something to bring into the foreground the essential problem of *building*, because that is the most direct contact which architects have with the scientific method—which is what planning is.

In a remarkable small book which has been published recently, *Science in War*,* it is stated thus : " Thought, ordered and organised thought, directed to speedy decisions, is the first requirement. All professional people now have the responsibility of making this kind of effort, of analysing the needs of action in their own particular spheres, of organising collaboration in their own profession, of acting in collaboration with local and national authorities, and where these authorities are lacking in initiative or wasteful in effort, not fearing to criticise or to initiate effective action on their own account." This is a lot to do, but we can do it.

* Penguin Books.

ARCHITECTS AND THE ROYAL ENGINEERS

The note in the July number of the JOURNAL stating that the R.I.B.A. qualifying examination has been recognised by the War Office as a suitable qualification for Officer Cadet Training Units of the Royal Engineers has, apparently, been misunderstood by many members and students.

There is, of course, no direct admission into an Officer Cadet Training Unit. Entry to an Officer Cadet Training Unit is in all cases from the ranks and selection is only made after a recruit's training course has been carried out in a Training Battalion, Royal Engineers, or Royal Engineer Unit, and after it has been ascertained that the candidate has, in addition to his technical qualifications, the necessary powers of leadership, military zeal and efficiency to warrant his selection for further training for commissioned service.

In any case the number of vacancies is limited and as a number of names has already been submitted by the R.I.B.A. to the War Office as a result of the notice in the JOURNAL and technical Press in June, it is unlikely that there will be any further vacancies for some considerable time to come.

WAR OFFICE ADVISORY COMMITTEE ON BUILDING QUESTIONS

A Committee has been set up by the War Office to advise the Army Council on building questions, including the placing of works contracts and the supervision of works in progress. The Committee has already started its work. The personnel of the Committee is as follows :—

Mr. J. Jameson, C.B.E., *Chairman* (Director, Anglo-Iranian Oil Co.).
Mr. M. T. Tudsbery, M.I.C.E. (Civil Engineer to the B.B.C.).
Mr. C. E. Elcock, [*F.*].
Mr. Arthur S. Ainsley.
Secretary : T. A. G. Charlton, Room 141, War Office, Whitehall, S.W.1.

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

AWARDED BY THE ARCHITECTS REGISTRATION COUNCIL OF THE UNITED KINGDOM

The Architects' Registration Council of the United Kingdom announce that Maintenance Scholarships have been awarded for the year 1940-1941 to the following to attend Schools of Architecture as stated :—

Mr. J. Baird : *Edinburgh College of Art.*
Mr. W. T. Bebb : *Welsh School of Architecture.*
Mr. P. F. Bennett : *The Polytechnic, Regent Street.*
Mr. J. E. Cowper : *Birmingham School of Architecture.*
Mr. K. C. Evans : *Birmingham School of Architecture.*
Mr. R. M. Maxwell : *University of Liverpool.*
Mr. H. A. Walton : *University of Liverpool.*

The Maintenance Scholarships awarded in previous years to the following candidates have been renewed for a further period of one year :—

Mr. R. B. Turner : *University of Manchester.*
Miss B. Reeves-Palmer : *The Polytechnic, Regent Street, London.*
Mr. H. G. Arnold : *University of Liverpool.*
Mr. D. Cathels : *Edinburgh College of Art.*
Mr. S. L. Harris : *Edinburgh College of Art.*
Mr. W. D. Pritchard : *University of Liverpool.*
Mr. L. E. Sykes : *University of Manchester.*
Mr. J. H. Wright : *The Polytechnic, Regent Street, London.*
Mr. H. S. Page : *The Polytechnic, Regent Street, London.*
Mr. G. B. Oddie : *King's College, Newcastle-on-Tyne.*
Mr. A. Halliday : *University of Liverpool.*
Mr. W. H. Davies : *The Technical College, Cardiff.*
Mr. R. S. Campbell : *University of Liverpool.*
Mr. G. F. Bateman : *University of Liverpool.*
Mr. G. Bardsley : *University of Manchester.*

The Maintenance Scholarships awarded to the following students have been placed in Suspense for the duration of their military service :—

Mr. W. E. Hiner : *University of London.*
Mr. R. Brown : *King's College, Newcastle-on-Tyne.*
Mr. T. W. Gregory : *Birmingham School of Architecture.*
Mr. I. A. Munro : *Edinburgh College of Art.*
Mr. I. W. Paterson : *Aberdeen School of Architecture.*
Mr. N. W. Tolson : *Bartlett School of Architecture.*
Mr. A. McWilliam : *Edinburgh College of Art.*
Mr. A. J. McCowan : *Aberdeen School of Architecture.*

OBITUARY

We regret to record the deaths of the following members, which have been notified to the Institute since the last issue of the JOURNAL and in addition to those recorded elsewhere in this issue :—

Hon. Associate

Sir Arthur S. Cope, K.C.V.O., R.A.

Fellows

Elias Cosmos Henriques. *President of the Indian Institute of Architects and a member of Council.*
John William English.
William Roland Howell.
William George Hunt.
Brook Taylor Kitchin.
Edwin Fewster Waugh Liddle.
John Murray.
Charles Pickford.

Retired Fellows

Thomas Charles Agutter.
George Hornblower.

Associates

George Kenneth Crowe.
Thomas Harold Hill.
Edward Howley Sim.

Licentiates

David Morgan Davies.
Frederick George Farrington.
James McKissack.
Alan Frederick Thompson.
Edward Alan Warren.

INTERMEDIATE EXAMINATION RESULTS

MAY 1940

The R.I.B.A. Intermediate Examination was held in London, Hull, Manchester, Newcastle and Plymouth from 17 to 23 May 1940.

Of the 129 candidates examined, 61 passed and 68 were relegated. The successful candidates are as follows :—

Abbott, Henry.
Allen, Robert Charles.
Alton, Jack Preston.
Brandreth, George Anthony Wilson.
Brown, Henry Faulkner.
Butterfield, Lawrence Albert.
Butters, John Charles.
Chapman, Dennis Edward.
Chapman, Ronald Frederick.
Cramp, (Miss) Irene Mabel.
Crosland, Brian.
Davies, David Charles.
Denyer, John Henry.
Dowell, Norman Charles.
Fogarty, Oswald Joseph.
Garland, Robert.
Goorney, Jack Louis.
Gould, George David.
Harris, Derrick Nigel Osborne.
Hubbard, Philip Peter.
Husain, Saiyed Mohammed.
Hyne, Henry Reginald.
Judd, George William.
Kennedy, Charles Victor Kitchener.
Kirk, Arthur George.
McLavy, William Victor.
Matthews, Vernon Reginald.
Mein, Henry Jameson.
Mitchell, Cyril John
Morgan, Meiron Rees.
Murrell, Harry Charles.
Neill, Albert.
Owen, Stanley George.
Parry, Mervyn Henry.
Phillips, Leonard William Charles.
Price, Thomas Gerald.
Quickenden, Anthony Maurice.
Radford, John.
Rigler, John Sidney.
Riley, Eric William.
Robinson, Harold.
Rossi, Anthony.
Sherwood, Arthur Denis.
Sidwell, Norman.
Simpson, John Edwin.
Sload, Thomas Francis.
Smith, Haydn William.
Snowdon, William.
Southwood, Robert Charles.
Steele, Stuart.
Stone, Reginald Leslie.
Thicke, Rodney Charles Ellison.
Thompson, David Arthur.
Webb, Charles Herbert.
Willcox, John Thomas.
Williamson, Eric.
Wills, Francis Braim.
Wilson, Alan Herbert.
Wilson, James Alison.
Wyler, Derreck Roy.
Yard, Gilbert Harry.

COMBINED PRECAST—IN SITU REINFORCED CONCRETE CONSTRUCTION

By D. A. STEWART

In the discussion which followed his paper at the R.I.B.A. on 18 June, Mr. R. Fitzmaurice referred to the fact that, because of the loss of continuity of structure, normal reinforced concrete pre-fabrication technique was much more expensive in use of steel than in-situ *work. Mr. D. A. Stewart, the author of this article, referred in the same discussion to systems which existed and one of which he had designed, by which continuity could be obtained with pre-fabricated R.C. members, effecting remarkable savings in steel-work over normal, pre-fabrication methods. Mr. Fitzmaurice, in reply to Mr. Stewart's remarks, said that this was a very important point and that he felt that pre-fabricated continuous constructions gave the best of both worlds; when such systems were available they should be adopted if possible.*

In addition to the description and illustration of Mr. Stewart's pre-fabricated continuous R.C. beams, this article also contains a description and illustration of a form of truss which Mr. Stewart has designed, and which is being used in a hospital building designed by Messrs. Darcy Braddell, Humphrey Deane and Pelham Bird [F./F./A.], and now being built for H.M. Office of Works under their supervision.

In his lecture on War-time Building before the R.I.B.A. on 18 June, Mr. Fitzmaurice stressed the importance of what may be termed the Theorio-practical compromise.*

A successful compromise of this nature requires from a designer—whether he is architect or structural engineer—a wide practical experience which can only be acquired on the job. At the same time constant contact with the productions side is necessary. Even the man who lacks the full practical experience of a competent structural engineer can get invaluable help and advice from specialists in the manufacturing and contracting sides of the industry.

The professional man need have no qualms on the score that he is placing an indignity on his calling when he handles the tools of the trades, for he is bringing a trained mind to bear upon a problem which demands a solution. His labours should, therefore, rank with those of research scientists in well-equipped laboratories. Every designer has first the obligation to solve a particular problem, but at the same time he should be constantly striving to effect improvement in structural technique and improvement in structural materials.

The present conditions ruling in the building world have caused a minor revolution in design, particularly in the flooring and roofing of buildings where materials possessing high tensile strength are required.

The use of reinforced concrete construction, up to economic limits of span, in place of steel framing has resulted in a considerable saving in steel, plant and man power. But the most economical R.C. designs call for a considerable use of timber as shuttering which becomes immobilised for from one to ten days, depending on the type of structure and weather conditions.

It has, therefore, been the author's endeavour to design a system of construction which reduces the use of shuttering to precast concrete proportions and, at the same time, offers the advantages of continuous stress diagrams.

Consideration of the bending moment diagrams of a simply supported beam and a continuous beam, at intermediate spans, equally and uniformly loaded, illustrates the advantages of continuous construction. It becomes obvious that since the maximum bending moment of the continuous beam is less than that of the simply supported beam the tensile and compressive stresses will be proportionately reduced, and hence a saving in steel is obtained.

It must, nevertheless, be remembered that the diagram only illustrates a pair of intermediate spans and does not represent end conditions. The designer must, therefore, make up his mind after taking into account the particular characteristics of the building or buildings upon which he is working, whether it is desirable to design special beams for the end bays or reduce their span, maintaining the same sections of concrete and steel. Again, it may be possible to effect a compromise on the question of stresses and use the same beam throughout, thus saving production and erection costs by maintaining a uniform product.

Continuous structures offer advantages only in so far as the positioning of the supporting members remains relatively constant. Should a pillar supporting part of a continuous beam sink so that the beam loses its support at that point, the stresses due to negative bending will be reversed and hence the concrete of the beam will be subject to tension. In this case, fracture is likely to occur at any section between the points of contraflexion adjacent to the sunken support.

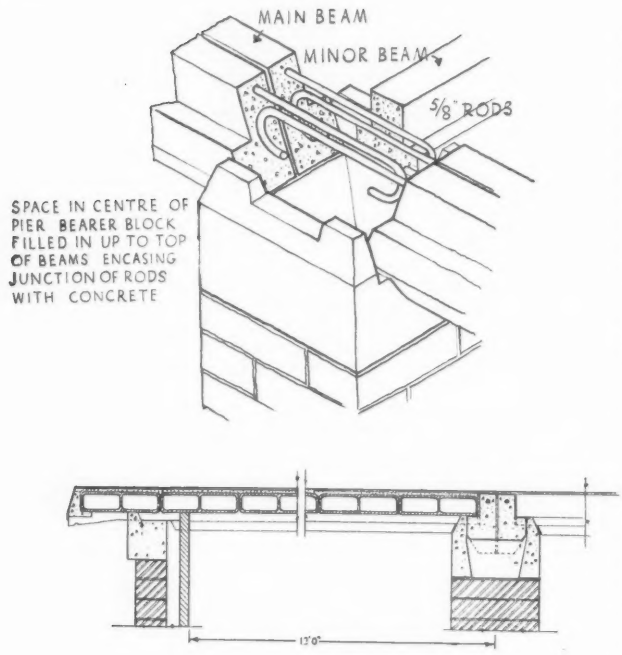
On this account, it may be desirable to reinforce doubly over this danger zone. Whether or not loss of support is likely to occur must, in the circumstances, be decided on the individual merits of the case, the type of loading, foundation, stresses, etc.

The accompanying isometric illustrates one method of connecting two precast members so as to form a continuous beam. It will be observed that the precast block forming the cap stone of the pillar is designed to act as in situ shuttering about the beam junctions into which a 1 : 1½ : 3 stiff concrete may be well rammed.

It may also be noted that over the range of reverse bending the internal lever arm is somewhat reduced but this is offset by an increase in the effective breadth of the compression belt over this section of the beam, giving it the characteristics of a T beam.

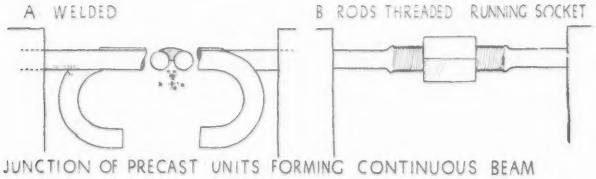
It is sometimes difficult to design these beam junctions so as to give adequate bonding between steel and concrete. It is, therefore, suggested that the bars which extend from the ends of each individual beam should be threaded and connected by means of a running socket after the beams have been placed in position, levelled up and before the in situ concrete is filled in.

* Wartime Building. R. Fitzmaurice. R.I.B.A. JOURNAL 17 June 1940, p. 187. *Discussion*, R.I.B.A. JOURNAL 15 July 1940, p. 215.


MAIN BEAM
MINOR BEAM
5/8" RODS
SPACE IN CENTRE OF PIER BEARER BLOCK FILLED IN UP TO TOP OF BEAMS ENCASING JUNCTION OF RODS WITH CONCRETE
17'0"

A compromise might also be adopted between ordinary bonding and welding in the manner illustrated, although the suggestion definitely opposes recommendations set forth in the Code of Practice, where it is stated specifically that welding is not admissable in tension reinforcement.

Welding, nevertheless, has been adopted in steel structural units, such as light-weight trusses, types of which have been put forward by the British Steelwork Association for use in training camps, and there is, therefore, a certain amount of precedent for the adoption of this technique to facilitate reinforced concrete construction. Before employing welded joints to link reinforcement, the immediate and apparent advantages of the procedure must be carefully weighed against the disadvantages inherent in this proposed system. Additional plant of a specialised nature must be at the disposal of the contractor as, for instance, either gas or electric welding equipment. Highly skilled welders must be employed which means the fitting in and handling of an additional trade on the contract. Further, there is the expense involved in welders standing by, unless a continuity of work can be arranged for them. Finally, proper supervision must be given to the aligning and bedding of all the precast units making up the continuous construction before welding and concreting takes place.



JUNCTION OF PRECAST UNITS FORMING CONTINUOUS BEAM

Apart from any other consideration, the precast in situ compromise has this outstanding advantage over any other method of concrete construction that under proper factory conditions production of units can continue all the year round irrespective of weather conditions. This also applies to a great extent to the small amount of war when delay in the erection of factories, hospitals and the like may cost thousands of lives. Last winter, which was particularly severe, saw building, and consequently munition production, held up for more than two months.

Shop fabricated concrete units have yet another advantage over concrete mixed and moulded at site in that proper control can be exercised in regard to grading, mixing, placing and curing.

Since the ratio of water to cement determines the strength of concrete, it is evident that where this ratio can be closely controlled, as it can under properly organised shop conditions, the factor of safety, or as Mr. Fitzmaurice expressed it, the factor of ignorance, can be reduced. This is of assistance to the designer who can determine from test cubes made to his specification the most economic form of beam or stanchion to develop.

The designer of pre-fabricated units has to bear a greater responsibility than the designer of in situ constructions because whereas the latter need take little or no cognisance of handling of masses of concrete except in skips or shovelfuls, the former is bound to consider the handling of every unit in the factory and again on the building site. His is, in fact, the steel fabrication problem somewhat accentuated on account of the greatly increased fragility of the structural units and also their greater weight for equal strength.

When designing units in precast concrete it should be borne in mind that these should be of one of two weights. That is to say, either the units should be small enough to be handled and placed comfortably by two men or they should be heavy enough to warrant the economic use of mechanical lifting.

They should also be designed so that they may be easily stacked at the factory and on the site and so shaped that there can be no doubt as to their true positioning, *i.e.*, the units should only fit into their appointed positions when the reinforcement intended to withstand tension takes up its tensile work on the beam becoming loaded. Where it is possible for an element of doubt to arise in this connection the units should be clearly marked "Top" and "Bottom."

It is also desirable that slinging points should be marked on long slender members which are to be handled by crane or hoist so that undue stresses are not imposed on the non- or lightly reinforced side.

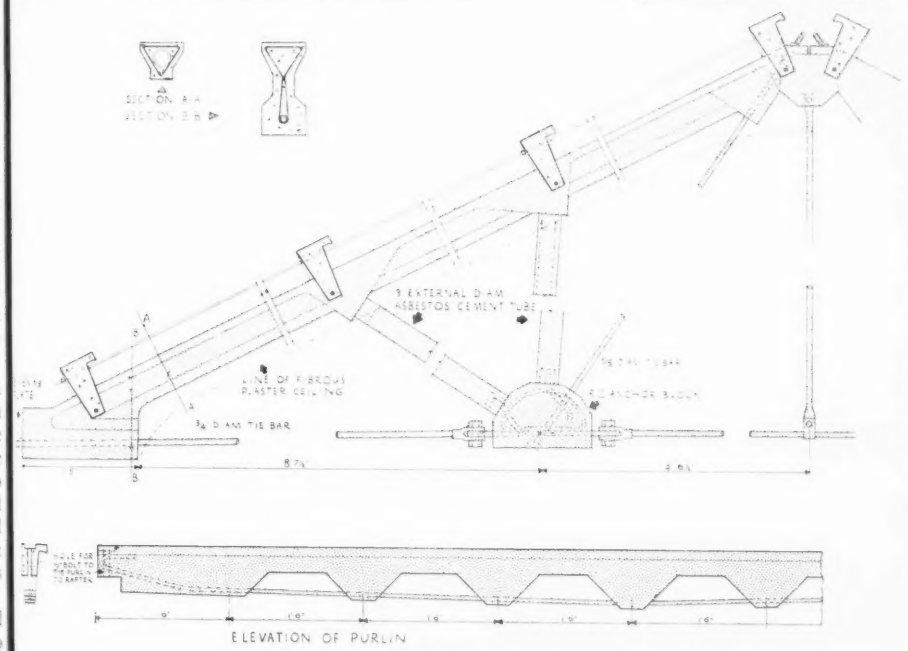
One of the many bogys which haunts the contractor these days is transport, and it has been argued that on this score factory produced concrete is not economic because fuel can be conserved by hauling sands and aggregates

from the local pits and cement from the nearest depot to make precast units on the site. At first sight this argument may appear to be justified, but it is doubtful if this is really the case because design of these latter units must be based on compressive stresses of about 950 lbs. per sq. in.,* using rich mixes and increased volumes of concrete, which adds not only to the difficulty of handling but increases the load on foundation stanchions, etc., so that while the haulage distance may be considerably reduced the loads hauled are, of necessity, increased. In addition, as has been pointed out earlier, concreting can only take place as and when weather conditions permit. In fact, the site prefabricating position is just as untenable as the suggestion that steel framing should be constructed from rolled sections delivered from the mills in bulk to be cut, set, drilled and riveted at site.

Unfortunately, laxity of thought and execution are a dominant feature of a large percentage of concrete work carried out in this country. This is, perhaps, most perfectly illustrated by reading through any specification for concrete where the water content in relation to the cement content is never mentioned in spite of the fact that it is universally known that the ratio is the term with more influence than any other on the quality of the concrete.

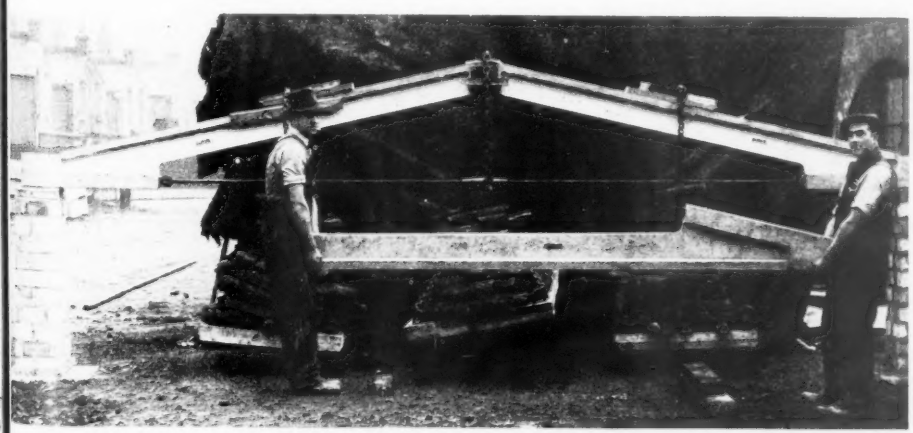
During the last six months hundreds of trusses have been designed in reinforced concrete, most of which have been intended as roofing members for the Services types of hut.

As is only natural, the manufacturers of prefabricated concrete have been instrumental in putting forward a large variety of these designs, many of which have appeared



Truss designed by D. A. Stewart, used in a hospital by Messrs. Braddell, Deane & Bird, illustrating the application of combined pre-cast—in situ construction. When the work was first tendered for all the trusses were in steel, below them were flat plastered ceilings, carried by timber bearers which were suspended by iron hangers. After tendering on this basis the steel and timber controls were instituted and the whole scheme was held up. The adoption of Mr. Stewart's truss made it possible to proceed with the work without the fundamental change in design that would have been necessary if a flat roof had been adopted. The difficulty of hanging the ceiling was overcome by running it as a barrel ceiling close under the rafters.

The total weight of steel for 100 sq. ft. of floor covered is 66.5 lbs.



The photograph shows the ease with which the rafter units can be handled by two men.

*Factory produced concrete under "commercial" controlled conditions will allow working stresses of 1500/2000 lbs. sq. inch.

in the technical press under the auspices of one or other of the associations.

Of those designed to span 19 ft. at 12 ft. intervals, the weights range from three-quarters of a ton to one weighing about one-third of a ton, designed for the War Office by the author and at present in considerable use.

An examination of these designs shows the large majority to be what may be called "selfish" designs. In other words, they are easy to fabricate and can be handled at works at an early stage where lifting tackle is easily available, but the contractor who has to off-load at the site and erect these same trusses tends to take a very poor view of the situation indeed, particularly when his site is a sea of mud and he knows he could have had steel truss weighing about 3 cwts. each in other circumstances.

Larger span trusses have been designed to cover spans up to 30 ft. and more, but these, as complete or even half units, are extremely clumsy to handle because of their dimensions and weight.

To meet these difficulties trusses were designed by the author which embodied two features calculated to reduce to a minimum the disabilities mentioned above.

In the first place it was decided that where tension steel was in any case adequately protected by being inside a building there was no point in loading it with a dead weight of concrete; therefore, as far as possible, all tension steel should be exposed. This exposure of the steel allowed it to be taken up to a working stress of 20,000 lbs. per sq. in. as concrete cracks could be neglected.

In the second place, it was decided to reduce to a minimum the possibility of secondary bending stresses by pin jointing as many compressive members as possible. This second decision made it possible to fabricate the truss in sections, transport it in the same manner, stack the units conveniently at site and assemble them either on the ground at the point of erection or, alternatively, erect them bit by bit in their working positions, the main rafters being located first and supported at the centre until the struts and ties were in position and able to take their load.

A further advantage was that if one member was broken in the course of transit and erection, a complete truss was not ruined and work would not be held up, or any great cost incurred.

BULLETINS ON TECHNICAL MATTERS ISSUED BY THE MINISTRY OF HOME SECURITY: RESEARCH AND EXPERIMENTS BRANCH

THE PROTECTION OF GLASS

BULLETIN No. C.4

THE PROTECTION OF GLASS IN HOSPITALS

Introduction

Recent air raids on this country have shown the importance of preventing broken glass from being scattered by the blast of high explosive bombs. Numbers of casualties have been caused by flying or falling glass. Preventive measures are essential in rooms, such as wards and operation suites of hospitals, occupied during raids.

The protection of hospital windows is not a simple problem. Horizontal or sloping glass in skylights and roofs and large sheets of plate glass need different treatment from glass in windows of ordinary size. It requires study and detailed application to overhaul existing protection in the light of recent knowledge. A protective scheme may involve also some staff organisation for quick shifting of beds, placing of window screens, opening of doors, etc.

Existing Information

Protective methods have been fully described in A.R.P. Memorandum No. 12, "The Protection of Windows in Commercial and Industrial Buildings," and in the more recent pamphlet, "Your Home as an Air Raid Shelter." These two publications should be studied in conjunction with this Bulletin.

General Notes

The breakage of glass by blast cannot be prevented except by removal or possibly by closing up the window opening completely with brickwork or with a substantial barricade as described in the Appendix to A.R.P. Memorandum No. 12. The primary object of such closure would be protection from bomb splinters which are much more lethal than broken glass; the protection to glass is only incidental and is effective only when the closure is complete.*

Secondly, nothing stuck on glass will make any material difference in the amount of glass broken by blast; nor can any simple bracing system, so far examined, be relied on to help matters. There is no question of an adhesive treatment "saving" the glass.

The aims must be to prevent or at least reduce casualties from violent scattering of broken glass and to keep the room habitable after the glass is broken. This latter is mainly a matter of protection from the weather.

A single explosion can damage panes of glass, even on the far side of the building, in a light well, on a roof or inside the building. It is impossible to forecast whether glass will fall inwards or outwards. Glass in interior partitions, screens and fanlights can be as dangerous as that in external windows. Large panes of glass in doors are equally dangerous. If such glass does not serve as weather protection replace it, where necessary, by a material either opaque or translucent as required.

Glass in windows and doors is less liable to fracture by blast when they are open than when closed. They should be as wide open as possible, but mere opening does not eliminate the need for protection.

Materials, etc.

The great national demand for materials may make it necessary to treat windows in order of importance. Rooms which will be unoccupied during air raids should come last. Thorough precautions in rooms, such as wards occupied by severe cases, operation and similar suites, and kitchens and stores containing exposed food, are preferable to hasty and possibly inadequate protection of all the glass in a hospital.

Use as wide a range of protective methods as possible. Not all the recommended materials are now readily available

Protection of Vertical Windows

Plain glass can be replaced by wired glass or substitutes for glass, but short of removing the glass, there are three ways in which the scattering of broken glass can be reduced:—

(1) *Covering windows with wire netting of ½ in. or smaller mesh.* To allow cleaning and adjustment of windows, or to enable window fastenings to be reached, the wire netting is best fixed to detachable frames. This form of protection

* A decontamination centre in a substantial building was recently affected by a 500-lb. bomb bursting at a distance of 70 ft. All the windows, which were large, had been heavily sandbagged, externally, but a gap had been left a few inches from the top. Most of the glass in the windows, including some from panes 6 ft. below the top of the sandbagging, was scattered violently over all the interiors. Had the centre been in use, particularly by unclothed persons, heavy casualties must have been caused by glass.

is specially suitable for large windows. Moreover, wire netting would make a good base for temporary weather protection if the glass should be destroyed.

(2) *Covering windows with internal light-weight screens, fitted close to the glass, described and illustrated in A.R.P. Memorandum No. 12 and in "Your Home as an Air Raid Shelter."*

Such screens, although they may be displaced by blast, usually cause the broken glass to fall close to the window. Screens should be suspended both for ease of replacement and even to prevent them becoming missiles themselves. This recommendation does not apply to wire netting in frames mentioned in (1) above. Protective screens of all types must be in place during raids.

(3) *Anti-scatter treatment*

Panes of glass properly covered by adhesive "anti-scatter" treatments will remain in place under mild blast even if badly cracked; but under severe blast they may fall out bodily. It is better, but not essential, that adhesive treatments should extend beyond the glass over the window frames. Glass which is not exposed to the weather (e.g., in partitions) and which cannot be removed can with advantage be given anti-scatter treatment on both sides. Adhesive treatments fall into four types, which have been arranged in approximate order of decreasing strength. All the anti-scatter treatments are applicable to smooth glass. Glass with a rough surface or leaded lights can best be protected by screens or wire mesh. Thick curtains and blinds help to prevent glass flying under mild blast, but are definitely not an alternative to protective treatment.

(i) *Textile materials*

Strong textile nettings or other fabrics if firmly stuck to the glass afford good "anti-scatter" protection. Some nettings are obtainable ready coated with adhesive and only require to be damped. The fabric should extend over the glazing bars and be stuck to them as well as to the glass.

Any fabric stuck with a water adhesive must not be washed (e.g., gum, glue, paste) and even tends to come unstuck if the window gets damp. This can be improved

(*a*) by varnishing over the edges, or better over the whole of the fabric when it is thoroughly dry.

(*b*) by securing the edges with adhesive tape.

Instead of a water adhesive, a preparation insoluble in water may be used such as dope, varnish or lacquer. This is brushed or sprayed on the glass and the fabric is pressed into place while the surface is still tacky. After the net has been attached to the glass a coat of the material used for attaching it can be applied over the net. The net, when properly dry and set, can be wiped down with a damp cloth if it should get dirty in use.

If paper is used, it should be thick and tough. Thin papers applied in criss-cross strips are not recommended. Papers reinforced with a mesh of cotton, linen, hemp, sisal or other fibre are to be preferred. Flour paste goes sour after a day or two and should be freshly prepared for use. The addition of a preservative is not worth while.

Where permanent obscuration does not matter, an all over covering of cardboard, millboard or American cloth may be used. Adhesives should be stronger than those used for paper; suitable adhesives are flexible glues for either hot or cold application; paper-hangers' paste or "cold water paste." The last two should be made rather stronger than usual and it may be necessary to wet the cardboard before applying the adhesive to it.

(ii) *Transparent films*

Cellulose film, whether plain or self-adhesive, is affected by moisture, which causes wrinkling. A coat of good pale varnish or lacquer applied as a waterproofing over the film helps considerably to prevent them from absorbing moisture from the air. This is an important precaution in all rooms where the air is likely to be charged with moisture (e.g., operating theatres and sterilising rooms). Self-adhesive film has the advantage that it needs only to be pressed on the glass (preferably with a roller) and gives a better finished appearance than plain film applied with a separate adhesive. With cellulose acetate film, gum and other water adhesives are unsuitable. The manufacturers of the film should be consulted on the special adhesive required. There are also various self-adhesive cellulose acetate films. A hand roller for applying self-adhesive tape has been developed by the Building Research Station, Garston, near Watford, Herts, from whom particulars are obtainable.

(iii) *Strip treatments*

Although a greater degree of protection is obtainable by applying one of the tested treatments all over the glass, strips of material spaced apart can nevertheless be used with good effect, but the closer the spacing the better. The strips should preferably be not less than 1½ in. wide and should be spaced with not more than 6 in. of clear glass between them. Narrower strips should be spaced correspondingly closer together.

(iv) *Liquid coatings*

A liquid coating is not expected to give effective anti-scatter protection on panes more than 4 sq. ft. in area. The glass must be perfectly dry before application and should not be hot from the sun. A 3-in. soft bristle brush should be used, brushing downwards only and allowing the coating to flow freely. The first coat should be allowed to set before applying a second coat. The coating should extend on both sides of the glazing bars.

This class includes rubber latex, compositions containing rubber latex, with or without a sealing coat and synthetic resins. A note of caution is sounded here. Many proprietary materials of this class have been advertised with extravagant claims. Hospitals are warned against accepting the unauthenticated claims of advertisers.

These materials are apparently easy to apply, but in practice it is not easy to get a coat of satisfactory thickness. They are liable to lose their protective value when exposed to light, particularly sunlight, and it is not always possible to detect by mere inspection that their virtue has departed. This applies with special force to rubber latex preparations.

Some of these preparations are unreliable from the start, some are useless in 10 days, and few have survived three months' exposure. The prospect of detecting decay, removing perished coats and periodical renewal is not encouraging.

Intending purchasers of such preparations should ask to see a final report from the Building Research Station, and if it is not forthcoming or indicates defects, they would be well advised to reject the material. It is also possible that the material offered may not have the same constitution as that tested; purchasers should, therefore, ask for a written guarantee from the makers that the material offered is identical with that tested by the Building Research Station.

Roof Glazing

During an air raid persons in rooms with roof glazing run risk from incendiary bombs, anti-aircraft fragments and machine-gun bullets. Roof glazing that is "shadowed" from the direct blast of bombs by parapets, higher buildings, or by the angle of the roof slope, is somewhat less likely to be damaged than glazing directly exposed to blast. Severe blast may cause wired glass, when fractured, to fall bodily from roof lights. In protecting roof glass, give special attention to retaining weather-proofness after fracture, and to precautions against injury to equipment by falling glass. Temporary weather protection is given by covering

the glazing externally with a suitable hessian-bitumen treatment, for which a British Standard (A.R.P.) Specification is under preparation. Incidentally, this treatment provides an efficient means of obscuration.

The addition of supports underneath, across the glass at about 2 ft. centres, will help to keep the fractured glass in place, particularly wired glass. Wooden battens about 1 in. by ½ in. securely fixed to the glazing bars will serve; they should touch the glass. The supported glass, together with the external hessian-bitumen treatment, is likely to keep the surface weather resisting (and obscured) for some weeks.

Similar support can be given by wire netting, which should be close up to the glass. Netting is most desirable under plain (not wired) glass. Without support by battens or netting, dangerous fragments of glass may fall at odd intervals, long after fracture. If the netting is of ½-in. mesh none but very small fragments will fall. To prevent all glass from falling some strong sheeting material must be securely suspended under the whole glazed area.

In many hospitals there are small lantern lights in the concrete roofs of corridors, etc. While the concrete will normally resist anti-aircraft fragments and the 1 kilo incendiary bomb, if complete overhead protection is required, it will be necessary to dispense with the lantern light and to cover the opening with a 4-in. reinforced concrete slab or with two layers of sandbagging on stout boarding with bituminous sheeting as weather protection.

Light Fittings

Electric fittings, in particular electric lamps and radio valves, are less liable to damage by blast than is generally supposed. Suspended light fittings behave well, but are vulnerable to flying glass splinters and to bomb fragments.

Occupied Rooms Generally

In rooms which must be occupied during air raids, the following should be considered:—

(*a*) *Wards.*—All glass panes should be treated to prevent flying. Where beds are beneath windows, they should be drawn towards the middle of the ward to reduce the risk to patients from treated panes of glass blown bodily from the windows. Patients should be instructed to cover their heads with the bedclothes as a protection against falling plaster and any fragments or dislodged panes which may fly some distance inward.

(*b*) *Operation Suites.*—It cannot be expected that operation suites with large areas of glass will remain usable under conditions of air attack. Not only are the windows liable to fracture but also glass screens and glass-fronted cupboards. Safety lies in complete removal of all glass except that in utensils and suspended light fittings. Window openings should be completely bricked up or wholly barricaded, and any roof-light openings should be covered by concrete slabs or sandbags on timber. If the operation light is a single freely suspended unit (such as the Zeiss type) fracture of the glass is not likely, especially if the window openings are wholly blocked or barricaded.

Apart from danger to the occupants of operation suites, severe damage to glass may keep the suite out of use at a time when it is most needed. It is wiser to take precautions beforehand.

(*c*) *Kitchens.*—Kitchens are not likely to be occupied during air raids, but if glass in kitchens is not protected there is serious danger of exposed food receiving particles of broken or powdered glass. Exposed food should be kept in refrigerators, containers or storerooms without windows. Protective device can do no more than prevent the flying or falling of the larger glass fragments. Receptacles, such as saucepans and basins, should be stored upside down when not in use to avoid the risk of small glass fragments entering them and remaining unnoticed. Lids of all receptacles should be closed before the kitchen is vacated.

Glass Substitutes and Repair of Damaged Glazing

The dangers of flying glass are eliminated by its removal and the substitution of alternative, non-splinterable materials. Having studied this Bulletin, inspect the glass throughout the hospital. Label, remove, crate and store every pane of glass that can be dispensed with. Where necessary, replace by transparent, translucent or opaque material, according to the circumstances. Such materials will also be required for temporary or even permanent repair. Suitable materials, both translucent and opaque, are listed in A.R.P. Memorandum No. 12.

Translucent materials possessing a light transmission approaching that of glass are at present difficult to obtain owing to the demands of aircraft production. Flexible cellulose acetate materials, reinforced with metal or fabric mesh, are, however, obtainable. These are reasonably translucent but are not transparent. Alternatively oiled or waxed fabrics may be used.

Suitable opaque materials, apart from boarding which is difficult to obtain, are bituminous sheeting, felts, asbestos-cement sheet and plaster boards. The last, if well coated with paint externally and at the edges, is likely to give reasonably permanent weather protection on vertical glazing. Bituminous sheeting is the most suitable material for covering the openings of damaged roof glazing.

It is desirable to make arrangements beforehand for both temporary and permanent repair to glazed openings.

A number of anti-scatter treatments have been tested at the Building Research Station and found to afford a useful measure of protection against flying glass. Details of such treatments can be obtained on application to the Director, Building Research Station, Garston, Watford.

BULLETIN No. C.7

The Protection of Factory Glazing

1. Several cases have occurred recently of serious delay in factory production following extensive breakage of glass by bombing. The delay has resulted chiefly from the destruction of black-out and exposure of the plant to weather, and to a less extent from flying and falling glass. In many cases the damage, apart from that to glazing, has been insignificant. It has become clear that the protection of glazing is of the greatest importance where factory production is concerned.

2. The following case is typical. A single bomb detonated on a shop at the edge of a large factory consisting of several groups of buildings. These had roofs of 30° pitch, partly covered with corrugated sheet steel and partly with continuous ranges of roof glazing. Two only of the shops had roof glazing treated with hessian-bitumen, and although these two shops were from 100 ft. to 210 ft. from the explosion and had all glass fractured, no glass fell at time of explosion and black-out and weatherproofness were maintained for some days. Of the remaining unprotected shops, one at 150 ft. to 270 ft. from the explosion had all roof glass dislodged. In a second at 220 ft. to 270 ft. from the explosion, all roof panes were fractured and most fell. In a third at 210 ft. to 450 ft., most of the glass fell except one range of wired glass which, though cracked, did not fall. In a fourth at 360 ft. to 540 ft., a small amount of glass fell. To summarise, in the factory as a whole at least half of the roof glass was damaged, production generally was seriously dislocated and in some shops entirely suspended for several days. Had all the glass been treated as was that in the two shops first mentioned, the delay would have been insignificant.

3. A large amount of research into the protection of factory glazing has been undertaken and is still in progress. Results so far obtained, together with the practical experience of air raiding, allow the following definite recommendations to be made:—

(*a*) **Permanently Obscured Roof Glazing.** — External hessian-bitumen treatment maintains temporary weather protection after the glass is fractured. If the glass is also supported by wire mesh close underneath or by metal or wood transverse supports at about 2 ft. intervals touching the glass, weather protection is permanent.

A British Standards A.R.P. Specification of hessian-bitumen treatments and of supports to roof glazing has been prepared and will shortly be issued. There are also several proprietary treatments that are satisfactory.

(*b*) **Wired Glass.**—Wired glass is much less likely to fall out of roof glazing when cracked than is unwired glass of equivalent thickness. It may, however, be dislodged bodily and therefore requires support underneath by large mesh wire netting or by transverse supports as described above.

(*c*) **Vertical Glazing.**—Vertical glazing in windows is more liable to damage by bombs exploding at ground level than sloping roof glazing, particularly when the latter is "shadowed" from direct blast.

(*d*) **Protecting Vertical Glazing.**—While in many cases it is important to prevent the flying of glass in vertical glazing (this can be effected by fixing wire mesh inside), it is more important to preserve the integrity of black-out and to protect against weather. The latter is best achieved by the use of internal light-weight screens as described in A.R.P. Memorandum No. 12, "The Protection of Windows in Commercial and Industrial Buildings." A somewhat less satisfactory alternative is the use of a suitable adhesive treatment on glass, together with curtains and blinds as obscuration. The most recent information on adhesive treatments is contained in the pamphlet, "Your Home as an Air Raid Shelter."

(*e*) **Blocking Window Openings.**—As an alternative to existing blacking-out of vertical glazing with paint, and in view of the shortage of materials for making window screens, the bricking-up of window openings should be considered. This removes wholly the risk of delay in production following window glass breakage and also provides good protection to plant against bomb fragments. It is realised that additional ventilation may be required in many cases.

(*f*) **Good Protection.**—The optimum protection for an existing factory building will be obtained by:—

(i) bricking up vertical window openings;

(ii) treating obscured portions of roof glazing with hessian-bitumen together with support underneath. Alternatively, glass may be removed and other opaque, weather-resisting and non-splintering materials substituted;

(iii) treating unobscured portions of roof glazing with controllable obscuration, constructed to be weather-proof when closed, together with support underneath in the form of ½-in. mesh wire netting under plain glass, or in the case of wired glass, large mesh wire netting or transverse supports.

(*g*) **First-Aid Repair.**—It is very desirable to have ready a stock of materials for repairing damage to glazing. While the measures outlined above give good protection against the more distant blast effects, in the near neighbourhood of explosions (e.g., within about 100 ft. of a 250-kilo bomb) both glass and treatment are liable to be dislodged bodily. Also, some panes of roof glazing are likely to be fractured by debris thrown into the air. First-aid repair (which may also be permanent) should be rapidly undertaken. suitable materials in the case of roof glazing are tarpaulins. bituminous sheeting (which can be laid over glazing bars and fixed to them with suitable clips), asbestos-cement sheet, as well as materials more difficult to obtain, such as timber and corrugated sheet steel. The above materials may also be used for vertical glazing with the addition of translucent materials such as cellulose-acetate sheet, reinforced with wire or fabric mesh, or textiles, oiled or waxed. Where glass is replaced, it should be of the wired type.

(*h*) **Asbestos-Cement Sheeting.**—It must be realised that on roofs all types of asbestos-cement sheeting are vulnerable to blast, fragments and flying debris. This fact should be borne in mind in designing protection to the glass and in providing stocks of first-aid repair materials. The position in regard to vertical surfaces is somewhat different, asbestos-cement sheeting being much more resistant to blast than is glass in typical steel factory windows.

BULLETIN No. C.6

Damage to Cast-iron Pipes in Works

Recent reports of damage due to enemy air attack have shown the serious vulnerability of cast-iron water mains and other pipes buried in the ground. For example, an important works was put out of production for 4½ days after a raid as a result of damage to cast-iron water pipes.

Pipes above ground may be perforated by bomb splinters, though they can be protected against these without serious difficulty by a covering of at least 30 in. of earth, or 15 in. of concrete.

Pipes and ducts buried in the ground, though protected against splinters, are liable from their nature to be fractured owing to the large earth movement produced when a bomb explodes in the ground. An effective method of protecting them against destructive earth movements is to provide guard trenches, or to isolate the pipes or ducts by the provision of an air space 12 in. to 18 in. wide between them and the ground. Where the pipe is not buried at a great depth guard trenches on either side could in some cases be dug to a depth below the pipe. These trenches can be filled with brushwood to prevent erosion without destroying their effectiveness. The greatest care must, of course, be taken to ensure that the trenching does not introduce any possibility of the pipe line sinking. Where the pipe runs under a crossing it can be isolated from the surrounding earth by running it through a conduit.

Where the pipe is buried at a considerable depth the method suggested above is impracticable and in any case all parts of a system cannot be protected by guard trenches. It is important, however, that the danger from earth movements should be realised.

It should be made a matter of routine in any works to inspect all water circuits immediately after bombs have been dropped in the neighbourhood, to ensure that action can be taken without delay when damage has been caused.

In addition to the three Bulletins reprinted in full above the Ministry of Home Security has issued two others.

BULLETIN No. C.3

The Propping of Reinforced Concrete Beams

This deals with the strengthening of reinforced concrete beams over a basement shelter by the insertion of props or the insertion of new beams. (Bulletin C.1 in this series dealt with the propping of steel and timber beams.)

The Bulletin describes tests on half-size models of typical R.C. beams and tests show that, *for beams designed as simply supported*,

(1) the failing loads of the unpropped beams were 2.9 and 2.7 times the design load;

(2) the insertion of a central prop further increased the load-carrying capacity more than three times;

(3) the insertion of props at the third points increased the load-carrying capacity more than five times;

(4) the gap left between the prop and the beam had no serious effect on the static load-carrying capacity, i.e., reasonable sinking or mild wedging of the prop is no danger;

(5) the nominal calculated shear stress at failure, though variable, is large.

For beams designed as two-span continuous beams,

(1) the failing load of the unpropped beam was 3.6 times the design load.

(2) the insertion of a central propr further increased the carrying capacity more than twice.

(3) the nominal calculated shear stress of the propper beam at failure was much the same as for the beams designed as simply supported.

BULLETIN No. C.5

Steps that should be taken to increase the resistance of "Umbrella" type shed roofs to collapse due to air attack

A normally designed roof of this type will hold up if any one stanchion or lattice girder is cut right through, but to withstand the transferred loads, which may act either upwards or downwards, at the eaves, it is necessary to tie down the end of the trusses. The deflection resulting from a cut main girder or stanchion may be limited by the provision of extra supports, preferably brick piers.

MEMBERS SERVING WITH THE FORCES

This sixth list of members serving with the Forces includes only the names of members whose *rank and unit* have been notified to the R.I.B.A. It is impossible to guarantee complete accuracy. We shall be glad to receive corrections and additions. Promotions notified to the R.I.B.A. are recorded. For much of this information we cannot be dependent on the serving members themselves and so must rely on the kindness of their friends and relations.

CASUALTIES

BURLEIGH HAROLD [*F.*], Capt. R.E. Missing, presumed lost in the "Lancastria" disaster.
CARTER, R. J. [*A.*], Pilot Officer R.A.F. Killed on active service.
COUSINS, F. W. [*A.*], 2nd-Lieut. R.E. Killed on active service.
GARRETT, S. C. [*F.*], Major. Prisoner of war.
GORDON, R. D. [*Student*]. Reported missing.
GREEN, DENNIS ARTHUR [*A.*], Sergt. Pilot R.A.F. Killed on active service.
LEWIS, PETER H. [*A.*], Flying Officer R.A.F. Reported missing.
PEMBERTON, O. J. [*Student*], Sub-Lieut. R.N. Died of wounds.
SCOLLAY, E. J. [*Student*], 2nd-Lieut. R.A. Previously reported missing, now reported prisoner of war.
WARREN, E. A. [*L.*], Capt. R.E. Drowned on active service.

DECORATION

FAIRBAIRN, R. R. [*A.*], Lieut. R.E. Awarded M.C.

UNITS AND RANKS OF SERVING MEMBERS

ADLER, CYRIL [*Student*], Pte. The Loyal Regt.
AITCHISON, R. [*Student*], Gunner R.A.
ALLERTON, KENNETH [*Student*], Sapper R.E.
ALLPORT, C. H. W. [*A.*], L/Cpl. R.E.
AMOS, P. C. [*A.*], Lieut. R.C.N.V.R.
BAKER, R. A. [*L.*], Capt. R.E.
BAREFOOT, LESLIE [*A.*], Lieut. R.E.
BARKER, J. H. [*A.*], Sapper Cadet R.E.
BARKER, WILLIAM [*A.*], Gunner R.A.
BAXTER, E. W. [*Student*], Signalman Draughtsman, Royal Corps of Signals.
BEATTIE, O. K. [*L.*], Major R.A.S.C.
BLYTHIN, C. F. [*A.*], 2nd-Lieut. R.E.
BROOKE, J. H. [*Student*], Pte. R.A.S.C.
BROWN, GILBERT S. [*A.*], 2nd-Lieut. R.E.
BROWN, RICHARD [*Student*], Pte. K.O.Y.L.I.
BRUCE, G. K. [*A.*], Sapper R.E.
BUDD, F. J. [*Student*], Sapper R.E.
BURDEN, S. E. [*A.*], Gunner R.A.
CASTLE, HUBERT H. [*A.*], Sapper R.E.
CAVANAGH, HOWARD E. B. [*A.*], Gnr. R.A.
CAVE, REGINALD W. [*A.*], Sapper Cadet R.E.
CHAPMAN, E. G. J. [*A.*], Signalman 38th (Welsh) Div. Signals.
COLLINS, A. C. [*A.*], Gunner 2/1st Survey Regt. Australian Imperial Forces.
COUTTS, G. A. [*A.*], 2nd-Lieut. R.E.
DANIEL, R. C. B. A. [*L.*], Lieut. R.N.V.R.
DAVIES, T. S. [*A.*], S/Sgt. R.E.
DEANE, P. A. [*Student*], Gunner R.A.
DE L'ORME, MAX [*L.*], Lieut. R.E.
DIMMOCK, W. H. [*Student*], Pilot Officer R.A.F.
DIXON, REGINALD N. [*A.*], Driver R.A.
DOD, K. L. [*Student*], Pte. R.A.S.C.
DOE, H. EDMUND [*A.*], Flight Lieut. R.A.F.V.R.
DOWELL, N. C. [*Student*], Trooper R.A.C.
ELLIS, W. G. [*A.*], Capt. R.E.
ELSOM, C. H. [*A.*], Pte. R.A.O.C.
EVANS, J. E. [*A.*], 2nd-Lieut. Dorsetshire Regt.
FLEMING, G. W. [*Student*], Sapper R.E.
FORBES, H. J. [*Student*], Pte. A.M.P. Corps.
FOSTER, F. H. [*L.*], Major R.E.
GARDNER, MARTIN [*A.*], Lieut. R.N.V.R.
GEACH, A. D. [*Student*], 2nd/Lieut. R.E.
GEORGE, W. N. B. [*A.*], Officer Cadet R.A.
GLEAVE, J. [*A.*], Sapper R.E.
GODDARD, H. G. [*A.*], Flight Lieut. R.A.F.
GOODMAN, C. J. [*L.*], Gunner R.A.
GORDON, H. V. [*A.*], Sub-Lieut. R.N.
GOSSAGE, N. F. [*A.*], Pilot Officer R.A.F.V.R.
GRAHAM-CUMMING, D. K. [*A.*], 2nd/Lieut. R.A.
GREEN, JOHN W. [*A.*], Major R.E.
GREGORY, WALLACE J. [*F.*], Major A.M.P.C.
GRIFFITHS, F. W. [*A.*], Officer Cadet R.E.
GRIMES, J. W. [*Student*], Fusilier, Royal Fusiliers.
HALL, MONTAGU A. [*F.*], Capt. A.M.P.C.
HANNAM, F. L. [*A.*], Sapper R.E.
HARBORNE, C. V. [*L.*], A.C.1 R.A.F.
HAVERS, NORMAN [*Student*], Pte. Hampshire Regt.
HEARD, G. T. [*A.*], Pilot Officer R.A.F.
HENDERSON, W. A. [*Student*], 2nd/Lieut. R.E.
HENSON, A. E. [*F.*], Major Northamptonshire Yeomanry.
HEWITT, F. A. [*A.*], S/Sergt. R.E.
HODGES, L. J. [*A.*], Lieut. R.A.
HOOPER, H. R. [*A.*], Lt.-Col. Suffolk Regt.
HOUGH, G. C. [*A.*], 2nd/Lieut. R.A.
HOWELLS, B. T. [*A.*], Sergt. R.E. (formerly Gunner R.A.).
HOWELLS, R. A. [*A.*], L./Cpl. R.W.F.
HUBBARD, P. P. [*Student*], Signalman R.N.
HUBBARD, R. P. S. [*A.*], Flight Lieut R.A.F.
HYNE, H. R. [*Student*], Ord. Telegraphist, R.N.
HYSLOP, GEDDES [*A.*], 2nd/Lieut. A.M.P. Corps.
INGLEFIELD, G. S. [*A.*], Capt. Sherwood Forseters.
INGLIS, H. C. [*A.*], Pte. Royal Berkshire Regt.
ISRAEL, LAWRENCE [*A.*], Bdr. R.A.
JACKSON, B. DE C. [*A.*], Sgt. H.A.C.
JERRAM, CHARLES J. [*A.*], Sub-Lieut. R.N.V.R.
LANCHESTER, H. R. [*A.*], Aircrafthand 2nd Class R.A.F.V.R.
LAWSON, P. D. [*A.*], A.C.2 R.A.F.V.R.
LEWIS, B. BANNATYNE [*F.*], Sgt. Australian Imperial Forces.
LINDO, HAROLD W. E. [*F.*], 2nd/Lieut. R.E.
LIVERSIDGE, P. H. [*Student*], Officer Cadet West Yorks Regt.
LOVEGROVE, C. E. [*Student*], Cadet O.C.T.U.
MILLER, J. S. [*A.*], Gunner R.A.
MINTY, R. J. H. [*F.*], Captain R.E.
MULVEY, W. J. [*A.*], Sapper R.E.
MURGATROYD, H. I. [*Student*], 2nd/Lieut. R.A.
MURRAY, D. [*A.*], A.C.2 R.A.F.
OAKES, C. ST. C. [*A.*], Capt. R.A.
PATERSON, ERIC A. [*A.*], Capt. R.E.
PAUL, E. H. [*Student*], Gunner R.A.
PEARCE, ERIC [*A.*], Cpl. R.A.F.
PICKERSGILL, C. D. [*L.*], Capt. R.E.
PITT, R. A. [*Student*], Officer Cadet R.A.
PLATTS, J. A. C. [*A.*], Petty Officer R.N.V.R.
POWERS, E. S. [*A.*], Natal Field Artillery.
PRINCE, ARTHUR [*A.*], S/Sergt. R.E.
RATHMELL, MILES [*A.*], Gunner R.A.
REDKNAP, P. H. [*A.*], L/Cpl. R.E.
RIX, H. TERRELL [*L.*], 2nd/Lieut. R.E.
RUSSELL, V. F. [*Student*], Sapper R.E.
SANDS, D. O. [*Student*], A.C.2 R.A.F.
SCATCHARD, H. W. [*A.*], 2nd/Lieut. R.A.
SHEA, F. M. [*L.*], 2nd/Lieut. R.E.
SHERIDAN-SHEDDEN, J. R. [*A.*], Cadet O.C.T.U.
SMITH, P. D. [*Student*], Gunner R.A.
SMITH, R. A. R. [*A.*], Gunner R.A.
SMITH, S. W. J. [*A.*], A/Capt. General List.
STOUT, G. R. [*A.*], L/Cpl. I.T.C.
SUTHERLAND, R. O. [*A.*], Capt. R.E.
TEMPLEMAN, K. F. [*A.*], Gunner R.A.
TETLEY, P. I. D. [*Student*], Officer Cadet R.A.
THIRSK, JOHN [*Student*], 2nd/Lieut. R.A.
THOMPSON, D. A. [*Student*], Rct. Scots Guards.
THOMPSON, J. S. [*Student*], Capt. R.A.
THOMSON, STEWART [*F.*], Pilot Officer R.A.F.V.R.
TILLEY, PERCY F. [*A.*], Capt. R.E.
TODD, W. WYLTON [*A.*], Pilot Officer R.A.F.V.R.
TOMBAZIS, GEORGE [*A.*], Sapper R.E.
TOMLINSON, JACK [*A.*], Fusilier Irish Fusiliers.
TORRENS, MICHAEL [*A.*], Pte. Hampshire Regt.
TURNER, SYDNEY [*A.*], Gunner R.A.
TWEMLOW, W. J. [*A.*], Sapper R.E.
VICKERY, C. R. B. [*A.*], Signalman Royal Corps of Signals.
WALKER, P. E. [*A.*], Pte. R.A.P.C.
WALKLEY, GAVIN [*A.*], Sapper Royal Australian Engineers.
WARD, KENNETH [*Student*], Pte. Duke of Wellington Regt.
WESTWOOD, NORMAN [*A.*], Pte. Royal Berks Regt.
WHITE, F. [*Student*], Gunner R.A.
WIGLEY, W. R. DE W. [*Student*], A.C.1 R.A.F.
WILLS, S. K. [*Student*], Bdr. R.A.
WRIGHT, F. S. [*A.*], Capt. R.A.
WREN, L. [*L.*], 2nd/Lieut. R.A.S.C.
YARD, G. H. [*Student*], L/Cpl. R.E.

Book Review

TOWN PLANNING. *By Thomas Sharp. Sm 8vo. 152 pp.+16 pp. photos. Harmondsworth, Penguin Books. 1940. 6d.*

Thomas Sharp wrote this book—or the greater part of it—before the war, but it is, none the less, a magnificent book to appear *now*. We cannot tell what opportunities we shall have to plan Britain after the war, though we all know that plan we must, intelligently and ruthlessly, if we are to save Britain from the degeneration and chaos from which military victory alone cannot preserve us: plan our towns and industries, our agriculture and the countryside, the social environment of the people. The essence of planning is organisation and to organise we must have facts, facts, and still more facts. Then we must have men at our disposal with mental capacity to collate the facts and understand their implications and with imagination to organise them into a coherent scheme. The problem is in two parts—to use wartime terminology—strategical and tactical. We will not get at the facts we need until our rulers and the people, including the professional people, realise that there is a strategical problem, or, in other words, that the constitution of the common weal needs defining. We cannot expect the State to lay down the millions needed for *this* war if the State does not even know that the war is on.

Thomas Sharp's book is appropriate to this moment because he puts down the essence of the strategical problem yet to be solved in fine generous terms and in a form (at 6d.) which every person can understand. This is every man's planning book, excellently free from pedantries, professionalisms, sops to sentiment-without-reason and nostalgia. He sees an England organised for a complete life, beautiful and efficient, calling into its service science, technology and art.

What he wants is "ours if we will." Man made our towns and man has made the countryside as we know it; most towns squalid "utter black and hopeless degradation," and the country raped by the towns and neglected for agriculture. It is not less in our power to restore them. We are spending now thousands of millions on war and must be competent to spend no less on re-creation. This is where the book starts, the English Tradition. Those who have read Thomas Sharp's previous books, *Town and Countryside* and *The English Panorama*, will find here the same sympathy for the 18th-century English town and the suave beauty of the 18th-century English countryside which the 19th and early 20th centuries destroyed, first by sordid neglect and latterly by pseudo-planned development of town-country. All this is here finely compressed, though the compression does not leave out much that will irritate the garden-city devotees and the people who fight against all reason to maintain the 12-house-to-the-acre standard.

A large part of the argument is devoted to analysis of the English suburbia, the town-country. Every view of this type of development is shown to reveal its faults: it spreads the town into the country and destroys the country as it spreads; it is caused by a desire to get the best of both town and country and deprives the town-country dwellers of the merits of either. Its origin in the Howard plan for each family unit to become a unit of part-time peasants has not been fulfilled. The health reason, that open development gives light and air, has been distorted to imply that only open development can give this and the obvious potential merits of open development are often negatived by bad orientation. "This muddling, hit-and-miss, prejudice prompted, reaction-founded method of controlling town growth is no way to obtain good towns. We want principles that are rationally arrived at, and, where possible, scientifically based on demonstrable fact."

To this analysis of suburbia, which is developed as an argument in favour of reasonably compacted towns based on a re-creation of the values of the street, Thomas Sharp adds arguments, which should be convincing to architects, that the one-level town, all of small houses, with a sky-line unrelieved by any salient buildings, is "utterly monotonous." "Given imaginative planning, the sky-lines of our new towns could be most attractively diversified. We could have towers of flats rising up into the air. . . .We could have church towers and blocks of flats serving a similar intended purpose. Even factory chimneys and the gasometer could be utilised for studied ordered effect if we chose."

The problems of planning what Thomas Sharp calls the countryman's country are less well defined than those of town planning. Inevitably any writer to-day slurs them over. Agriculture is the Cinderella and the best that even so enthusiastic and broad-minded an author as this can do is to theorise vaguely. The planner is justified in part in his vagueness because the problem of planning the countryside is that of planning an actual industry as well as planning the utility within which the industry and the lives of the workers can be carried on.

In the last chapter a sketch is made for a National Planning Ministry and its subsidiaries. The need for this must be driven home. Nothing less, despite the hesitations of the Barlow Majority Report, will do; nor is it sufficient to tinker away at Ministerial reorganisation, as seems to be the present policy. The planning of the use of the land and of the chief spoiler or improver of the land—the building industry—must go together. This new building Ministry can only be created as part of a general plan involving the integration of scientific research and the formation of a National Statistical Bureau and a general social policy. The planning authorities of every country must be studied and lessons learnt from all of them, from the Fascists and Nazis, from the U.S.A.'s New Deal and Russia's Gosplan. We must know which direction we want to go and when and how, and not be frightened.

This is a good book and once again we must be grateful to Allen Lane, the publisher, and his collaborators for giving us the right book at the right time.

Accessions to the Library

1939-1940—III

The Accession List and the Review of Periodicals are two of the most important cultural or scientific works produced by the R.I.B.A. Almost all research into building and architectural matters throughout the world is partially dependent in its basic bibliographical work on the information given more fully here than in any other published architectural work of reference. These bibliographies are not exciting reading for all members, but they are none the less absolutely essential. Now more than ever we must do our utmost to maintain work of this sort, which is no less necessary for those planning reconstruction than it is for those engaged on immediate wartime building problems. Members taking part in the work of the R.I.B.A. Research Board are particularly advised to study these Lists and the Review of Periodicals with care.

Lists of all books, pamphlets, drawings and photographs presented to or purchased by the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists of refernce.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by the publishers for review marked R.
Books purchase marked P.
** Books of which there is at least one copy in the Loan Library*

ARCHITECTURE

R.I.B.A. S.R. × (06) (09)
The Growth and work &c. J. A. Gotch, ed. 1934.
Annotated copy, by Harry Sirr.
Presented by Mr. Sirr [Ret. F.].

LEICESTER AND LEICESTERSHIRE SOCIETY OF ARCHITECTS
Annual report 1939-1940. 1940. R.

SOCIEDAD DE ARQUITECTOS DEL URUGUAY 06 : 72 (899)
[List of members.] *In* Arquitectura *journal*, 1939, No. 203.
1939.

BIBLIOGRAPHY

HITCHCOCK (H. R.), *junr.* Inf. file 72 : 016 (73)
American architectural books.
2nd ed. : Additions and corrections to Parts iii, E-M, and iv, N-R ; Part v, S-Z.
—dupl. typescript. 11″. [1940.]
Presented by the Compiler.

PRESERVATION

72.025 (06) (058)
SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS
Annual meeting . . . ; Annual report . . . [Certain volumes,] inconsecutive.
—10 vols. in all, each 8o. Lond. [1880/1919.]
To make up library set. Presented by the Society, through Mr. W. W. Begley [*L.*].

HISTORY

KNIGHT (C. R.) 72.036.6 (931)
Architecture. (*Chapter from* Auckland, N.Z., University College : 1840 and now, 8o. 1940.)
pam. 9″. n.p. [1940.]
Presented by the Author [*A.*].

DRAWING

VAN DE PUT (A.) *and* POPHAM (A. E.) 72.064.034 (44)
Two drawings of the fêtes at Binche . . . 1549. (*From* Jnl. of Warburg Institute, iii, No. 1-2.)
pam. 10¾″. [Lond. 193— or 1940.]
Presented by the Institute.

VOCATION, PROFESSIONAL PRACTICE

ARCHITECTS' BENEVOLENT SOCIETY
Report . . . 1939, *&c.*
1940. R.

72.08 [33 : 940.6
GREAT BRITAIN : PARLIAMENT : COMMITTEES. SELECT COMMITTEE ON NATIONAL EXPENDITURE
Reports : 1st—9th.
9 pams. 9¾″. Lond. : H.M.S.O. 1940. 1d., 4d., 3d., 1s., 3d., 4d., 2d., 3d., 1d. P.

BUILDING SOCIETIES ASSOCIATION
B— s— year book 1940. Official handbook *&c.* G. E. Franey, ed. [1940.] R.

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE OF THE UNITED KINGDOM
List of new members and cessers, . . . 1938, to . . . 1940, *&c.*
1940. R.

06 : 658.8 (42)
INCORPORATED SOCIETY OF AUCTIONEERS AND LANDED PROPERTY AGENTS
Supplement containing lists of new members and of cessers from 31 Dec., 1938 to 30 June, 1940. (1940 Supplement to List of members, *cover title.*)
pam. 8o. Lond. 1940. R.

MS.

TANNER (W. A.), *transcriber* 72.08 : 72.036
Specification *&c.*—[MS. note-book : transcriptions, to serve as exemplars, of specifications, conditions of contract, &c., for 19th-century buildings ; including specification and professional account for Reform Club (Barry), 1838, conditions appended to specification for Corn Exchange, Louth (P. Bellamy), and architect's statement of cost for Birmingham Free School (Barry).] (14 items.)
MS. vol. fo. 1865.

Author was pupil of G. E. Street and others, and later partner with W. H. Romaine-Walker (now R.-W. and Jenkins).
Presented by Mr. Gilbert H. Jenkins [*F.*].

WAR OFFICE (WAR DEPARTMENT) 72.083.121
Abridged schedule of prices for works and repairs to requisitioned buildings, &c.
13″. Lond. : H.M.S.O. 1940. 3s. P.

72.083.2 : 940.6 + 699.895 : 72.025.1 + 72.08 : 347.434] 940.6
MINISTRY OF HEALTH
[Memorandum.] (Building works contracts ; Returns as to war damage to property ; Government's scheme of compensation for war damage to property.) (Memorandum 11 A 26.)
leaflet. 8¼″. Lond. 1940. R.

BUILDING TYPES

(CIVIL)

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch. file D.S.I.R.
Wartime building bulletins :

725.186.2
No. 3. Type designs for small huts.
1940. 1s. R.

(RELIGIOUS)

726.54 (42.14 H)
HIGHGATE : CHURCH OF ST. AUGUSTINE OF CANTERBURY
Saint Augustine . . . Golden jubilee 1888-1938. [History. J. D. Sedding and J. Harold Gibbons, architects.]
pam. 8½″. Lond. [1938.]

MS.

SIRR (HARRY) 726.54 (42.64 M)
The Church of Saint Andrew, Marlesford, Suffolk. Descriptive sketch.
MS. 10¼″. 1937.
With loose note on the bells.

726.54 (42.64 S)
SAXMUNDHAM : ST. JOHN THE BAPTIST CHURCH
The Parish church of St. John *&c.*
pam. 6½″. Gloucester.]193—.[
—*All presented by Mr. Harry Sirr* [*Ret. F.*].

(EDUCATIONAL)

LONDON COUNTY COUNCIL 727.61 (42.16F) H
Annual report of the Horniman Museum, Forest-hill . . . (First). 1901-1902. (No. 645.) [With ext. view of museum.]
pam. 9¾″. Lond. [1902.]

727.95 (42.1)
BISHOPSGATE FOUNDATION AND INSTITUTE, *London*
A History of the foundation, with . . . construction of the hall and library, *&c.*
pam. 9¾″. Lond. [1894.]
Plates missing.
—*Presented by Mr. John Hilton* [*A.*] *and Mrs. Hilton, great-niece of C. Harrison Townsend, architect of the Horniman Museum and the Bishopsgate Institute.*

BARROWS (ALICE) *and* SIMONSON (LEE) 727.991 : 725.822
The School auditorium as a theater. (United States : Department of the Interior : Office of Education. Bulletin 1939, No. 4.)
pam. 9¼″. Washington : Supt. of Documents. 1939. (10c.) R.

(DOMESTIC)

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch file D.S.I.R.
Wartime building bulletins :

728 : 693
No. 7. House construction.
1940. 1s. R.

STUDIO, *publ.* 728.036.6
Decorative art 1940. [Modern homes, *wrapper subtitle.*]
1940. 10s. 6d. R.

728.1 (06) (05) + 711 (06) (05)
NATIONAL HOUSING AND TOWN PLANNING COUNCIL
The Housing and planning news-bulletin. A war-time news-bulletin *&c.* No. 1 (July)—.
Lond. 1940—. R.
Irregular.

HOUSING CENTRE
Annual report : 5th, 1939-1940.
[1940]. R.

MS.

FLITCROFT (HENRY), *architect* 728.3 (42.1) C
[Chatham House, No. 10 St. James's Square.] Articles of agreement . . . between Benjamin Timbrell . . . and Sr William Heathcote . . . [for the erection by Timbrell for £5,700 on land on the north side of St. James's Square, London, on part of the site of Ormond House (the Duke of Chandos's), according to a specification included in the

agreement, of a new brick house to be designed by H— F—.] *Signed* William Heathcote ; *witnessed by* H. F— *and* James Swift.

MS. (parchment). 1734.

Memorandums about the House *&c.* [and other papers on the site, building and equipment].

9 sheets. MSS. [c. 1734.]

Proposals by Benj^in^ Timbrell to S^r^ W^m^ Heatchcot [*sic*] for building a house *&c.*

MS. [c. 1734.]

All in paper wrapping marked To M^r^ Flitcroffe.

Presented by the British Records Association.

Ormond House demolished 1735 ; new house, occupied by Heathcote 1737 ff., later No. 10, Chatham House (now Royal Institute of International Affairs).

HONEYMAN (H. L.) 728.84 (42.82 D)

Dunstan Hall or Proctors Stead [Embleton, Northumberland]. (*From* Archæologia Aeliana, 4th series, xvii.)

pam. 9″. Gateshead-on-Tyne. 1940.
Presented by the Author [*A.*].

728.86 : 69.071.5

NATIONAL HOUSE-BUILDERS' REGISTRATION COUNCIL

House purchase made safe.

Reprint. pam. 8½″. [Lond. 193—.] 2d. R.

728.86 : 69.071.5] 608.375

Model specification. (No. 1.—Relating to brick construction.)

2nd ed. pam. 8½″. Lond. 1939. 1s. R.

On buying a house.

leaflet. 8½″. Lond. [193—.] R.

INDUSTRIAL WELFARE SOCIETY 728.932 : 725.4

Canteens in industry.

3rd ed. 9¾″. Lond. [1940.] 1s. R

INTERIORS

BRÖCHNER (GEORG) 729.098.036.1/6

Skönhed i hjemmet. Bohave og udsmykning [beauty in the home, furniture and decoration]. [Text by G. B—.]

sm. fo. Copenhagen, &c. n.d.
Presented by Mrs. Douglas Harmer.

ALLIED ARTS AND ARCHÆOLOGY

IMAGE (SELWYN) 7

Letters.—Selwyn Image letters. Edited by A. H. Mackmurdo.

8¾″. Lond. : Grant Richards. 1932.

With MS. insertion.

Presented by Mr. Harry Sirr [*Ret. F.*].

HOFFMAN (MALVINA) 73 + 727.75

Sculpture inside and out. [With chap. on studios, p. 95.]

10″. 330 pp. Lond. : Geo. Allen & Unwin. 1939. 15s. R.

BATSFORD, *publ.* 75.023.22 (42)

English watercolours. From the work of Turner, Girtin, Cotman, Constable and Bonington. Laurence Binyon, introd. (Art and nature in colour *series*. Hans Zbinden, ed.)

14″. 11 pp. + xii colour pls. Lond. : Batsford ; Berne : Iris. [1940.] R.

HARTRICK (A. S.) 75.036 (42) : 92 H

A Painter's pilgrimage through fifty years.

8½″. xii + 252 pp. + pls. Cambridge : U.P. 1939. 15s. R.

SOCIETY OF ANTIQUARIES OF SCOTLAND

Proceedings. 1938-39. Vol. lxxiii. 7th series—vol. i.

1939 [1940]. R.

Including : Fyvie Castle. W. Douglas Simpson.

BREMER (WALTHER) 902.6 .5))14

Die Stellung Irlands in der vor- und frühgeschichte Europas. *Trans.* Ireland's place in prehistoric and early historic Europe. (Royal Irish Academy and Rl. Socy. of Antiquaries of Ireland.)

pam. 8o. Dublin. 1928.

902.61 (41.5) : 069 (41.5 D)
7.033.1 (41)

DUBLIN : ROYAL IRISH ACADEMY—MUSEUM (*in* DUBLIN : NATIONAL MUSEUM)

Guide to the Celtic antiquities of the Christian period *&c.* By George Coffey.

2nd ed. 8o. Dublin. 1910.
—Presented by Mr. Harry Sirr [*Ret. F.*].

CEYLON : ARCHÆOLOGICAL SURVEY OF CEYLON

Annual report . . . for 1939.

1940. (10c.) R.

BUILDING SCIENCE

D.S.I.R. : B.R.S.

Report . . . for . . . 1939.

1940. 1s. R.
69 : 940.6 Arch file D.S.I.R.

Wartime building bulletins. Nos. 3-7.

1940.

Individually entered under subjects.

725.75 : 699.895 folder
69 : 940.6

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS : EVACUATION COMMITTEE

Memorandum on emergency buildings.

dupl. typescript & *Repr.* 13″. 1940. R

STRUCTURAL ELEMENTS

Inf. file

COOLING (L. F.) *and* GOLDER (H. Q.) 69.021.131.046

(Portable apparatus for) Compression tests on clay soils. (*From* Engineering, 19 Jan.)

pam. 11″. Lond. 1940.
Presented by the Building Research Station.

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch file

Wartime building bulletins :

69.023.7 + 725.186.2

No. 6. Part 1 : Arch construction without centering. Part 2 : Further designs for hut type buildings.

1940. 1s. R.

BUILDING PRACTICE AND INDUSTRY

69.08 : 331.814

INCORPORATED CLERKS OF WORKS ASSOCIATION OF GREAT BRITAIN

Year book. 1940-41 edition.

[1940.] R.

MATERIALS

EMPIRE FORESTRY ASSOCIATION

Annual report, 1939.

leaflet. [1940.] R.

BRITISH STANDARDS INSTITUTION 69 (083.74)

British standard specifications :

691.11 : 668.736.33

No. 913. . . pressure creosoting of timber.

1940. 2s. R.

TURNER ASBESTOS CEMENT *Co.* 691.227.6 : 691.54

War-time construction. Building with asbestos-cement.

pam. 12″. Manchester, &c. 1940. R.

COPPER DEVELOPMENT ASSOCIATION 691.73 : 620.193] 69.051.22

The Resistance of copper to soil corrosion . . . [especially] copper pipes for underground . . . services. [By H. G. Taylor.] (*From* the Engineer, 16 & 23 Feb.) (Pubn. No. 35.)

pam. 8½″. Lond. [1940.] R.

CONSTRUCTION

QUATUOR CORONATI LODGE

Ars quatuor coronatorum. Vol. l.

1940. R.

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch file D.S.I.R.

Wartime building bulletins :

693.54 : 725.4

No. 4. Supplementary type designs in structural steelwork *&c.*

1940. 1s. R.

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch file

Wartime building bulletins :

693.55 : 725.4

No. 5. Economical type designs in reinforced concrete for single storey factories.

1940. 1s. R.

SANITARY SCIENCE & EQUIPMENT

SPENCE-SALES (H.) *and* BLAND (JOHN) 696.11 : 628.1

England's water problem. A survey *&c.*

8½″. xi + 274 pp. + pls. Lond. : Country Life. 1939. 18s. R.

WAR OFFICE 696.12

Drainage manual.

4th ed. [reprint]. 13″. Lond. : H.M.S.O. 1935 (1939). 6s. P.

NATIONAL REGISTRATION OF PLUMBERS 06 : 696.12 (42)

Annual report of the general council.

[Lond. 1940.]

Inf. file

British Rubber Publicity Association 698.7 : 698.8

The Care and treatment of rubber flooring.

pam. 8½″. Lond. 1940. R.

Inf. file

Shaw (J.) 699.81

The Fire resistance of structures. (*From* Fire Protection and Air Raid Precautions Review, Feb. & Apl.)

pam. 11″. Lond. 1940.

Presented by the Building Research Station.

(A.R.P.)

699.895

Association of Architects, Surveyors and Technical Assistants

Better shelters.—A guide *&c.*

pam. 7¼″. Lond. [1940.] 3d. R.

Glover (C. W.) 699.895

Civil defence. *&c.*

2nd ed. 8½″. xviii + 764 pp. + pls. Lond. : Chapman & Hall. 1940. £1 16s. R.

699.895

Ministry of Home Security : Air Raid Precautions Department

*Provision of air raid shelter in specified areas. (Home Security circular No. 38/1940.)

pam. 9¾″. Lond. : H.M.S.O. 1940. 4d. P.(2).

699.895

Ministry of Home Security : Central Board of Advisory Panels

Civil defence.—The incendiary bomb.

leaflet. 10″. n.p. [1940.] R.

699.895 : 623

Ministry of Home Security : Air Raid Precautions Department

Notes on the construction, maintenance and replacement of sandbag revetments.

pam. 9¾″. Lond. : H.M.S.O. 1940. 2d. P.

Cott (H. B.) 699.895 : 698.1] 591.157

Adaptive coloration in animals.

9¾″. xxxii + 508 pp. Lond. : Methuen. 1940. £2. R.

Ministry of Home Security : Air Raid Precautions Department

699.895 : 728

*Domestic surface shelters. (Air raid precautions memorandum No. 14.)

pam. 13″. Lond. : H.M.S.O. 1940. 3d. P.(2).

699.895 : 729.385

*Protection of windows in commercial and industrial buildings (Air raid precautions memorandum No. 12.)

pam. 9¾″. Lond. : H.M.S.O. 1940. 4d. P.(2).

SCIENCE (GENERAL) AND ENGINEERING

Royal Society of Arts

Annual report of council . . . 1939-1940 : *in* Journal, 12 July. 1940. R.

Svenska Teknologföreningen 06 : 6 (485)

Ledamotsförteckning . . . 1940. (Meddelanden, No. 32.)

8¼″. [Stockholm.] 1940. R.

Association of Consulting Engineers 06 : 62 (42)

List of members.

Reprint. 6¼″. Lond. 1940. 1s. R.

TOPOGRAPHY

Pope-Hennessy (James) 91 (42.1)

London fabric.

8¾″. viii + 184 pp. + pls. Lond. : Batsford. 1939. 10s. 6d. R.

Yeoman, *pseud.*

Pocket histories of Suffolk parishes. (*From* Suffolk Chronicle & Mercury.)

91 (42.64 M)

No. 250. Marlesford. (30 Oct.) 1931.

91 (42.64 G)

No. 282. Great Glemham. (26 Aug.) 1932.

2 pams. 8½″ × 10½″. n.p. 193—.

Lindley (Percy) 91 (42.67)

New holidays in Essex *&c.*

ob. 8o. Lond. 1892.

—Presented by Mr. Harry Sirr [Ret. F.].

Tombleson (W.), *draughtsman* 91 (43.4)

T—'s Views of the Rhine, edited by W. G. Fearnside. *engraved title.*

8o. Lond. 1832.

Presented by Mr. J. E. Verbury [F.].

No printed title-page? Imperfect.

TOWN AND COUNTRY PLANNING, RURAL PRESERVATION

711.3—162 (42.43)

East Monmouthshire Joint Planning Committee

Annual report (1st) and an explanation of the aims *&c.* 1939-1940. (M. E. Taylor, planning officer.)

pam. 8½″. [Newport, Mon. 1940.]

Presented by the Planning Officer [A.].

Palestine : Town Planning Adviser

Annual report for . . . 1938.

Jerusalem : Printing & Stat. Off. [1939.] (100 mils.) R.

U.S.A. : Federal Housing Administration 711.58

Planning neighbourhoods for small houses.

In Jnl. R.A.I. of Canada, 1940 June, and subsequent issue.

C.P.R.E.

Annual report [on] 1939 : *in* War-time progress report, xiii, No. 1. 1940. R.

C.P.R.W.

Annual report : 12th, [on] 1939.

[1940.] R.

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Friends of the National Libraries 02 (42) (06)

Annual report. 1939-40.

[1940.] R.

DUPLICATES, &c.

Also 7 reprints of articles by Harry Sirr *from the* R.I.B.A. Journal, *specially bound, mostly with MS. notes or additions.*

Presented by Mr. Sirr [Ret. F.].

DRAWINGS, PRINTS, &c.

Hastings : Street Architecture

Pelham Crescent, including St. Mary in the Castle ch. 18(24)—26-28, ch. 1828-30. Joseph Kay, archt. Measured D. R. Thicke, del.

4 sheets. *Penc. D., col.* (3) ; *Ph.* (3 on 1). 1939.

Presented by the Draughtsman.

Elmes (James), *del.*

Paestum : temples. Ext.

W. Colour. [18—.]

Temple : a Roman, based on 'Maison Carrée,' Nîmes.

W. Colour. [18—.]

Presented by members of the Architects' Benevolent Society (purchased by Mr. H. S. Goodhart-Rendel [P.P.] from Mrs. A. Francis, granddaughter of the artist).

Townsend (C. Harrison), *architect*

Works :—Church, mission : Wonersh, 1892—, *Repr.* & *Chr.-lith.* Cottages : "Roseteague" : Uxbridge (pair). Farmhouse, Hillgrove Farm. Houses, country, or alterations : Chilworth (2), 2 *W.C.D.*, 2 *Chr.-lith.* ; Hampstead : Haslemere, 2 *W.C.D.*, 2 *Chr.-lith.* ; Letchworth (2 designs), 2 *W.C.D.*, *Chr.-lith.* ; Northwood (altn.) ; Plaxtol (altn.) ; Salcombe (Cliff Towers) 1898, 2 *Repr.* ; Shankhill (also on Chilworth sheets) ; Uxbridge ; Wimbledon, *W.C.D.*, *Chr.-lith.* ; [unnamed] (4), *W.C.D.*, *Ph.*, *Chr.-lith.* (also on Wimbledon sheet) (& *Chr.-lith.* on Haslemere sheets). Institutes : Bishopsgate —, London [1894], *Repr.* Lodge : Castle Ashby. Stables [unnamed]. Village cross : West Meon, 1903, *Repr.*—All *W.C.D.* where not stated.

98 sheets on 32. *W.C.D.*, *Chromolith.*, *Repr.*, & *Ph.* [18— & 19—.]

Presented by Mr. & Mrs. John Hilton [A.].

Florence : San Lorenzo

New Sacristy (Medici Mausoleum) : int. Gabriel Carelli. (1821-1900), del.

W.C.D. [18—.]

Presented by Mr. Conrad H. R. Carelli, the artist's son, through Mr. Julian Leathart [F.].

MAPS: LONDON

—— as in 1563 [restored]. J. Wallis, publ.
Eng. 1789.

LODGES: LONDON

Buckingham Palace lodge, corner of Buckingham Gate & B— Palace Rd. (early 19th c.): ext. [since demolished].
2 sheets. *Ph.* 1904.

WEBB (*Sir* ASTON), *architect*

Churches: restoration: Burford. Chancel, as restored: int. looking E. T. Raffles Davison, del.
Sepia D. 1895.

House [unnamed]: int. T. R— D—.
Ink D. n.d.

Memorials: Queen Victoria, by Buckingham Palace: lay-out schemes [unexecuted]. Aerial views from over the Mall. T. R— D—, del.
Ink D. (2); *Ph. of Model.* [c. 1901.]

[Same.] Gates [executed] to Birdcage Walk (Australian Meml.) and Green Park (Canadian Memorial). T. R— D—.
Ink D. (2). [c. 1901.]

Museum: Victoria & Albert. Ext. from S.W. T. R— D—.
Ink D. [189— - 190—.]

—All presented by Mr. E. Playne [*A.*], *successor to Sir Aston Webb & Sons.*

STEVENS (ALFRED)

Drawings, in various private collections: tracings, by D. S. MacCol. 66 sheets, and 18 on 6. *Tracings.* [18—] (19—)

ST. PAUL'S CATHEDRAL, LONDON: WELLINGTON MONUMENT

——. Alfred Stevens, sculptor. Measured drawings. J. M. Whitelaw, del. (*From* A.A. Sketch Book, 1910.)
6 sheets. *Repr.* 1910.
—Presented by Dr. D. S. MacColl [*Hon. A.*].

OTHER OBJECTS

COFFIN FRAGMENT

[Portion of foot of coffin of Sir Christopher Wren, in crypt of St. Paul's Cathedral, London. Accidentally removed in burying Constantia M. B. Wren, a descendant, in 1851. With remains of tapestry secured by gilt brass-headed nails.] (1 15/16 ins. long.)
fragment 1723.

With MS. note, c. 1851, describing its acquisition.
Presented by Mr. Gerald M. Burn.

Review of Periodicals (*Continued*)

The Accession List and the Review of Periodicals are two of the most important works produced by the R.I.B.A. These bibliographies are not exciting reading for all members, but they are none the less absolutely essential and now more than ever must be maintained.

HOUSING

CASTRUZIONI, CASABELLA (Milan), *1940 Apl. (No. 148), p. 6:*
Slum clearance and rehousing in a "città orizzontale" of "unit" houses on a grid plan; the unit house described in detail, and application to a quarter in Milan. Diotallevi, Marescotti, & Pagano, architects.

ARCHITECT AND BUILDING NEWS, *1940 June 14, p. 214;*
ARCHITECTS' JOURNAL, *June 20, p. 605;*
BUILDER, *June 14, p. 703:*
Timberless housing at Easington, single-storeyed and flat-roofed; by C. W. Clarke, R.D.C. engineer and surveyor.

ARCHITECT AND BUILDING NEWS, *1940 Apl. 26, p. 72;*
ARCHITECTS' JOURNAL, *May 2, p. 445:*
ARCHITECTURAL DESIGN AND CONSTRUCTION, *June, p. 140;*
BUILDER, *Apl. 26, p. 507:*
Experimental non-timber and non-parlour houses for Liverpool; by L. H. Keay [*F.*].

FLATS

ARCHITECTS' JOURNAL, *1940 Apl. 18, p. 407:*
Flats at Hove, by Joseph Hill [*F.*].

ARCHITECTS' JOURNAL, *1940 Apl. 18, p. 410:*
Street block of flats in Prague, by Michael Rosenberg.

ARCHITECT AND BUILDING NEWS, *1940 Apl. 5, p. 16:*
Block of flats, Paris; by Léon J. Madeline.

ARCHITECTURAL RECORD (New York), *1940 May, p. 41:*
Flexibly-planned flats—each whole-storey apartment convertible into two—at Chicago; by G. F. Keck.

ARCHITECTURAL FORUM (New York), *1940 May, p. 309:*
"Garden apartments"—two-storeyed flat blocks in garden lay-outs—at Los Angeles and elsewhere.

BUILDING, *1940 Apl., p. 76:*
Municipal housing flats, Quarry Hill, Leeds, by R. A. H. Livett [*A.*]: further illustrations, with article by J. S. Allen [*A.*].

ARCHITECTS' JOURNAL, *1940 June 6, p. 575:*
Tenement flats, Liverpool (Wavertree Gardens), by L. H. Keay [*F.*].

ARCHITECT AND BUILDING NEWS, *1940 Apl. 19, p. 52:*
Tenement flats (Roche House), Stepney, by Culpin [*F.*] & Son; with access and private balconies.

ARCHITECTS' JOURNAL, *1940 Apl. 11, p. 385:*
Tenement flats estate, Wandsworth Borough Council: E. G. Culpin [*F.*], architect, assisted by A. E. Kelsey [*S.*].

BUILDER, *1940 Apl. 5, p. 409:*
Cottage flats at Trevethin, Wales: an experiment. J. Fogden, architect, with Miss E. A. Nicholls, domestic consultant.

COSTRUZIONI, CASABELLA (Milan), *1940 Mar. (No. 147), p. 4:*
Long multi-storey tenement flat blocks at Stockholm, by S. Wallander, and Prague, by Libra & Kan.

ARCHITECTURAL REVIEW, *1940 Jne, p. 195:*
Tenement flats in Milan; by Franco Albini (R. Camus & G. Palanti associates).

TOWN HOUSES

ARCHITECT AND BUILDING NEWS, *1940 June 28, pp. 237, 242;*
ARCHITECTS' JOURNAL, *Apl. 25, p. 427;*
ARCHITECTURAL REVIEW, *Apl., pp. 125 & 149:*
Block of 3 terrace houses, Willow Road, Hampstead, including the architect's own house, by E. Goldfinger.

CLUBS, HOTELS

SOUTH AFRICAN ARCHITECTURAL RECORD, *1940 April, p. 159:*
The Royal Johannesburg Golf Club, by Reid & Martin.

ARCHITETTURA (Milan & Rome), *1940 Mar., p. 133:*
"Grande albergo," Cattolica; by Melchiorre Bega.

ARKITEKT (Istanbul), *1939 Nos. 3-4, p. 76:*
Municipal hotel at Adana, Turkey-in-Asia, by S. Arkan: model and plans.

ARCHITECTURAL RECORD (New York), *1940 Mar., p. 43:*
Hotel (Albion), with solarium and pool, and an office and shop building with arcade, grouped on a block at Miami: by I. B. Polevitzky & T. T. Russell.

FARMS

ILLUSTRATED CARPENTER AND BUILDER, *1940 June 14, p. 766:*
Farm buildings with hollow blocks; article by J. N. Dominy.

HOLIDAY HOUSES

ARCHITECTS' JOURNAL, *1940 Apl. 4, p. 349:*
Holiday house at Kingsgate, Kent, by Brian O'Rorke [*A.*].

ARCHITECTS' JOURNAL, *1940 May 2, p. 451:*
Holiday house at Tisvildeleje; by V. Kaastrup.

ARCHITECTURAL RECORD (New York), *1940 Mar., p. 61:*
Holiday or week-end houses ("for occasional occupancy"): ten U.S. examples by various architects.

ARCHITECT AND BUILDING NEWS, *1940 Apl. 26, p. 76:*
Seaside house at Sea Island, Georgia, by F. L. Abrew.

COUNTRY AND SMALL HOUSES

PENCIL POINTS (New York & Stamford, Conn.), *1940 Mar., p. (131) 133:*
Country house having in one wing a museum or gallery with stacks for boxes of prints between the window aisles, and library gallery over: at Jenkintown, U.S.A., by E. A. Grunsfeld, junr. with W. F. Yerkes. With constructional details.

ARCHITECT AND BUILDING NEWS, *1940 Mar. 29, p. 309:*
Small house in Vienna, by Walter Loos.

EDILIZIA MODERNA (Milan), *1939 July-Sept. (No. 31), Oct.-Dec. (No. 32) (with English text of both, separately):*
Small houses in Italy: numerous recent examples and analytical articles. (Copies placed in Loan Library.)

ARCHITECTURAL REVIEW, *1940 June, pp. 197, 204 :*
Small houses in Milan, by Franco Albini, and on the cliff at Naples, by Bernard Rudofsky.

ARCHITECTURAL FORUM (New York), *1940 Apl., p. 211 :*
The low-cost house (special issue).

ARCHITECTURAL FORUM (New York), *1940 Apl., p. 226 ; May, p. 365 :*
John B. Pierce Foundation experimental house, prefabricated.

DOMESTIC SUBSIDIARY UNITS

BUILDER, *1940 May 31, p. 639 :*
Kitchens : article in sub-series Social service units, series War-time building practice, by R. C. Butler [*A.*] ; with diagrams on use of substitute materials.

FITTINGS

ARCHITECTURAL REVIEW, *1940 June, p. 219 :*
Book storage as decoration : illustrated article by Frederick Gibberd.

HISTORY AND BIOGRAPHY

ARCHITECTURAL RECORD (New York), *1940 Apl., p. 131 :*
The Roussillon, a Catalan-speaking region of Pyrenæan France : article and photos, by Basil Collier.

ARCHITECTURAL REVIEW, *1940 Apl., p. 117 :*
" Beau ideal " country house of 1833 (by J. C. Loudon and Charles Barry).

ARCHITECTURAL REVIEW, *1940 June, p. 207 :*
Hafod, Wales : a mansion, partly Gothic Revival, by Baldwin of Bath and others ; article and drawings by John Piper.

OFFICIAL ARCHITECT, *1940 Apl. :*
Birmingham city architecture, special number : buildings completed during the last ten years by the architectural office of the city engineer and surveyor (H. J. Manzoni), including fire station (—1935), three police stations, public assistance institutions, mental defective colony, and community hall ; also the civic centre, by T. Cecil Howitt [*F.*], and hospital centre, by Lanchester, Lodge & Davis [*FF.A.*].

ARCHITECTURAL REVIEW, *1940 June, p. 193 :*
Italian architecture : article, with illustrations of works by F. Albini, A. Pica, E. G. Faludi, and B. Rudofsky (entered also separately).

WERK (Zürich), *1940 Mar./Apl. (Nos. 3/4) :*
Architecture of Finland, special number : historical sketch and recent buildings, notably the hotel at Aulanko (already entered, p. 178), and the library at Viipuri, by Alvar Aalto (see earlier notices).

BOUWKUNDIG WEEKBLAD ARCHITECTURA (Amsterdam), *1940 Mar. 23 ;*

DE 8 EN OPBOUW (Amsterdam), *1940 Mar. 16, p. 51 :*
J. B. Van Loghem : biographical articles, with illustrations of his works (in B.W.A.).

BOUWBEDRIJF (The Hague), *1940 Apl. 12, p. 95 :*
Work of J. F. Staal : article by J. G. Wattjes, illustrated.

PENCIL POINTS (New York & Stamford, Conn.), *1940 May :*
Kentucky architecture : illustrated articles by Kenneth Reed and others, apropos of the A.I.A. convention.

DRAWING

ILLUSTRATED CARPENTER AND BUILDER, *1940 June 21, p. 806 :*
Measuring up of buildings : article, with specimen diagrams, by C. W. Craske [*A.*].

PROFESSIONAL PRACTICE

ARCHITECTURAL RECORD (New York), *1940 Mar., p. (81) 82 :*
Architectural careers : analysis of employment and registration of ex-college graduates.

ARCHITECTURAL RECORD (New York), *1940 May, pp. 75, 114 :*
Replies to a questionnaire on the future of architects and alternative relationships.

BUILDING SCIENCE

BUILDER, *1940 Mar. 29, p. 293 :*
Hut construction : a system of trusses of pre-cast reinforced concrete units.

ARCHITECT AND BUILDING NEWS, *1940 Apl. 12, opp. p. 30, and subsequent issues :*
" Structural economy : the war and afterwards "—supplementary plates of axonometric diagrams on structural problems, by George Fairweather. The first (folio A, sheets 1 ff.) showed forms of structure, frame or mass. Ground floor and upper floor structures : folio B.

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS, *1940 June 17, p. 187 :*
Wartime building : lecture by R. Fitzmaurice at R.I.B.A.

ARCHITECTS' JOURNAL, *1940 May 2, p. 446 :*
System of pressed steel interlocking units, by G. Bacher with Alister MacDonald [*F.*] : with view of erected hutment.

ARCHITECT AND BUILDING NEWS, *1940 May 10, p. 120 ;*
BUILDER, *May 10, p. 568 ;*
BUILDING, *June, p. 136 :*
" Tarran " system, using parabolic arches of timber ribs with Lignocrete panels.

ARCHITECT AND BUILDING NEWS, *1940 May 17, p. 143 :*
Light-gauge steel-framed roofs : diagrams accompanying report of lecture, Building in war time, by C. J. Kavanagh.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1940 May, p. (110), 113 :*
New systems of substitute materials. (Some items entered separately.)

BUILDING, *1940 May, p. 112 :*
Reinforced pre-cast frames with light concrete infilling.

ARCHITECT AND BUILDING NEWS, *1940 May 3, p. 92 ;*
ARCHITECTS' JOURNAL, *May 9, p. 469 ;*
ARCHITECTURAL DESIGN & CONSTRUCTION, *May, p. 110 ;*
BUILDER, *May 3, p. 526 :*
" Stancon " system of timberless construction (pre-cast concrete frame and slabs), applied to a military camp and to peace-time uses. Designed by Stanley H. Hamp [*F.*], with Mouchel & Partners.

BUILDER, *1940 May 24, p. 623 :*
" Scott walling " (timberless), for camps, by Bernard W. H. Scott [*F.*].

BUILDER, *1940 May 24, p. 611 :*
Substitutes for timber and metal, for non-structural elements : article, with table, in the series War-time building practice, by R. C. Butler [*A.*].

ROYAL ENGINEERS JOURNAL, *1940 June, p. 180 :*
Alternative materials and methods of construction for war hutting : article by Major C. M. Singer.

JOURNAL OF THE R.I.B.A., *1940 Apl. 15, p. 146, and other journals :*
Timberless floors and flat roofs : B.R.S. notes, with diagrams.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1940 June, p. 145 :*
Materials (mineral and reconstructed) : articles in series, Components of building, by F. E. Towndrow [*A.*].

ARCHITETTURA (Milan & Rome), *1940 May, p. 249 :*
Italian-made materials, including standard units ; article, with views of units and completed structures, by A. Petrignani.

ARCHITECT AND BUILDING NEWS, *1940 June 28, p. 260 :*
Equipment and materials made in Britain for export trade ; schools, factories, cinemas, and hospital kitchens, wards and operating theatres.

ARCHITECTURAL ASSOCIATION JOURNAL, *1940 May, p. 155 ;*
BUILDER, *1940 May 3, p. 538 :*
Lecture, The case for prefabrication, by D. Clarke Hall [*A.*] (Br.), and discussion (A. A. J.).

JOURNAL OF THE ROYAL SOCIETY OF ARTS, *1940 June 14, p. 673 :*
Plastics as constructional and engineering materials ; by H. V. Potter.

ARCHITECTURAL RECORD (New York), *1940 Apl., p. 73 :*
Steel : article on the material and its structural forms and uses, by Dr. Mario Salvadori and Bruno Funaro.

BUILDER, *1940 June 28, p. 747, and subsequent issues :*
Emergency assembly methods, including semi-permanent jointing : articles in War-time building practice series, by R. C. Butler [*A.*].

ROYAL ENGINEERS' JOURNAL, *1940 June, p. 237 :*
Substitutes for steel in reinforced concrete (notably bamboo and asbestos-cement) ; from a paper by D. de Simone in the Annali dei Lavori Pubblici (Dec. 1939), translated by A. S. Holme, illustrated.

SANITARY SCIENCE AND EQUIPMENT, PROOFING

NUESTRA ARQUITECTURA (Buenos Ayres), *1940 Feb. (No. 2), p. 473 :*
Lighting fittings, heating fittings, and kitchen fittings : well-illustrated article.

ARCHITECTS' JOURNAL, *1940 May 23, p. 529 :*
Luminescence in building : illustrated article by Olga Gemes.

JOURNAL OF THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS, *1940 May, p. 89 :*
Heating and hot water supply : miscellaneous troubles ; article by H. H. Bruce.

JOURNAL OF THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS, *1940 Mar., p. 34 :*
Heating, electric and gas : temperature distribution in both methods ; article, with diagrams, by R. Jessel.

HEATING AND VENTILATING ENGINEER, *1940 June, p. 506 :*
Heating of cathedrals : scheme for a hypothetical new building, with diagram.

JOURNAL OF THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS, *1940 Apl., p. 57 :*
Atmospheric conditions required for printing works ; article by A. C. Poulter, illustrated, with bibliography.

ARKITEKT (Istanbul), *1939 Nos. 11-12, p. 267 :*
Effects of earthquake on buildings in Anatolia : article and three views.

ARKITEKT (Istanbul), *1940, Nos. 1-2, p. 12 :*
Earthquake-proofing : domical house units ; project by Martin Wagner.

ARCHITECTURAL FORUM (New York), *1940 Mar., p. 161 :*
Heat insulation in relation to heating, combined costs : article and graphs by E. J. Rodee.

A.R.P.

BUILDER, *1940 June 7, pp. 673, 677 :*
Shelter for a legation, London, by Barnard & Smith [*AA.*] ; and curved concrete units to protect pavement lights.

JOURNAL OF THE AIR RAID PROTECTION INSTITUTE, *1940 June, p. 287 :*
Dual purpose structures for future use : paper by Sydney Clough [*F.*], with diagrams.

BUILDER, *1940 Apl. 12 :*
Car park and shelter scheme (only the shelter built), Kingston-upon-Thames, by Sydney Clough [*F.*] with W. W. Baldwin & associates.

ARCHITECTS' JOURNAL, *1940 May 30, p. 547 :*
Light obscuration and ventilation : article, with diagrams of ventilating arrangements, and views of industrial applications and proprietary devices.

KENTIKU ZASSI (JOURNAL OF INSTITUTE OF JAPANESE ARCHITECTS, Tokyo), *1940 Mar., p. 212 :*
Camouflage : article by S. Hosino, with isometrics and models illustrating different methods.

TOWN AND COUNTRY PLANNING

ARKITEKT (Istanbul), *1939 Nos. 11-12, p. 259 :*
Sheffield central planning scheme, article with 2 figures.

ARCHITETTURA (Milan & Rome), *1940 Apl., p. 187 :*
Magliana, a new suburb near Ostia : scheme by Mario de Renzi.

ARCHITETTURA (Milan & Rome), *1939 Dec. (Spec. No., supplementary) :*
Special number on the new work in Rome, including the World Exhibition of 1942 south-west of the city and the new quarter around it, the existing street widenings nearer the forum, and the projected rebuilt railway terminus : all with ample plans, and scale drawings, photographs, and models of the several buildings. An underground railway is to connect terminus with exhibition.

BULLETIN TECHNIQUE DE LA SUISSE ROMANDE (Lausanne), *1939 Mar. 25, p. 73 ; May 20, p. 128 :*
Planning of Lausanne, quarter by quarter, including sea-front development : articles by Marc Piccard.

ARCHITECTURAL FORUM (New York), *1940 Mar., p. (141) 142 :*
New York planning, open spaces, bridges and population : illustrated article, The Changing city, by Robert Moses, Parks Commissioner, with a note on architecture.

TOWN AND COUNTRY PLANNING, *1940 Apl. :*
The "Barlow" report (Royal Commission on the Geographical Distribution of the Industrial Population) : general articles by Sir Montague Barlow and others.

JOURNAL OF THE INDIAN INSTITUTE OF ARCHITECTS, *1940 April, p. 115 :*
Slum clearance, improvement (reconditioning and alternating demolition), and service (road widening and sanitary provision) in India ; lecture by S. L. Silam.

Correspondence

The President has received the following letter from the President of the Ontario Association of Architects, in reply to a message sent to the Presidents of Allied Societies :—

63 Sparks Street, Ottawa
23.7.40

DEAR MR. ANSELL,

Thank you for your letter of the 9th of July, and your expression of co-operation with this Association.

It was a kindly thought which inspired your letter, surrounded as you are with trials and anxieties. May you be blessed with wisdom and strength in the administration of your office in these difficult times.

The relationship of the R.I.B.A. and the Allied Societies is a prototype, in miniature, of the Empire. In these days of testing we feel the pull of our relationship more strongly than ever before.

Courage *will* sustain you. May the knowledge of unity strengthen you.

Yours sincerely,
A. J. HAZELGROVE,
President

WAR EMERGENCY STANDARDS

British Standards Institution,
28 Victoria Street,
London, S.W.1

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—It is appreciated that the difficulties resulting from the war conditions render it impossible for manufacturers in certain cases to adhere strictly to all the requirements of existing British Standards.

It has been brought to our notice that trade organisations are sometimes obliged, on account of the urgency, to take steps to secure general agreement to contract out of the existing B.S. specification requirements.

Might we suggest that should your organisation be faced with any such problems, they should immediately communicate with the B.S.I. and make use of our War Emergency procedure for any modification to a B.S. specification to be issued, thus simplifying the position for all concerned.

The machinery of the B.S.I. has been adapted to enable War Emergency Revisions or the preparation of War Emergency Standards to be put through with a minimum of delay—in some cases merely a matter of a few days.

The War Emergency Standards (or Revisions) are being issued in a distinctive form (on yellow paper) so as to avoid confusion with the general B.S. standards and it is also being made clear, wherever necessary, that such standards or revisions only apply to the home market and not to the export trade and can be modified again when peace comes.

A number of such war revisions bringing about the necessary co-ordination have already been issued and others are being prepared.

We might also add that in this work we are receiving the full co-operation of the appropriate Government Departments, who are frequently the users most directly concerned, and they welcome the issue of these War Emergency Standards where such are found necessary.

We would be grateful if you would kindly bring this matter to the notice of all your members.

Yours very truly,
C. LE MAISTRE,
Director

THE A.B.S.

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—It has been suggested that "chatter-boxes" to collect fines for careless talk and rumour spreading, might be placed in architectural offices and the proceeds to be given to the Architects' Benevolent Society.

The label illustrated here has been designed by Mr. L. D. Morrison for pasting on to any suitable box and is obtainable in a large-enough size for this purpose from the A.B.S., 66 Portland Place, London, W.1.

It is also suggested that it is possible to use the box as a "swear box" to penalise not only dangerous but also strong language!

Yours sincerely,

B. N. SOLLY,
Secretary

CHATTER · BOX

THE INSTITUTE'S APPEAL

The following is the sixteenth list of donations received up to 10 August 1940 in response to the appeal issued to all members and honorary members and students on 16 December 1938.

Members who are contemplating making an increased payment of subscription whereby the amount of the increase will be payable to the appeal fund are reminded that if they are prepared to enter into an agreement for the payment of such increased subscription for a period of seven years or more they will be entitled to deduct income tax at the standard rate from the amount by which the subscription is increased.

Full particulars were published in the issue of the JOURNAL for 6 February 1939 and can be obtained on application to the Secretary, R.I.B.A.

DONATIONS	£	s.	d.
"Anonymous"	1	1	0
F. S. Palling [*L.*]	1	13	0

The donations and increased subscriptions or contributions received and promised and bank interest up to 10 August 1940 represent a total of £7,082 1s. 8d. This amount does not include increase of subscriptions or contributions promised for which no definite period is stated.

R.I.B.A. RESEARCH BOARD

Mr. Richard Henniker, the Secretary of the Research Board, is being called up for active service and will in consequence be relinquishing his post.

Mr. R. A. Duncan [*A.*], will be acting Secretary for the time being and all future communications should be addressed to him at 16 Harpur Street, London, W.C.1.

Obituary

DR. JOHN A. PEARSON [*F.*]

Mr. Charles M. Hadfield [*F.*] writes as follows:—

The JOURNAL makes sad reading these days. The number which reached me this morning had a special blow for me in the notice of the death of my old (indeed, lifelong) friend, Dr. J. A. Pearson.

Others can speak more critically of his works; my relations with him were more personal and intimate.

His grandfather, Andrew Pearson, was a Scotch Mason of the old school, a friend of Hugh Miller, the geologist. He was a trusted servant of the contemporary Duke of Norfolk and it was from him that my father acquired much of his practical skill and knowledge. I have notebooks on building materials written by him for the latter, also an ancient photograph showing the pair "on tour"! His son (John Pearson, the late Dr. Pearson's father) was a builder in Sheffield for many years, who had a large following amongst the best families in South Yorkshire, by whom he was greatly esteemed.

I knew the late J. A. Pearson intimately from our respective boyhood and after he went to Canada we corresponded regularly, and on his visits home we invariably foregathered to "talk shop." Only last Christmas I had his usual "greeting."

He was a highly cultured and largely self-educated man, studious and ambitious, in the best sense.

On leaving school he worked as a stonemason for his father and also for a firm of Liverpool contractors, who were at the time building a church for my father.

Having obtained "all-round" experience of the building crafts in this first-hand way, he went West to seek his fortune, to the best of my belief without any advantages save his own ability and self-confidence.

I recollect quite well his telling me, before starting for Newfoundland, that he was ready to work as a labourer if Fate should prove unkind.

His career thereafter is public property; he was a man of lovable character, always full of enthusiasm, and with a keen sense of humour and an altogether abnormal capacity for hard work.

His passing comes to me as a sharp reminder (little needed, alas, these days) of the stark realities of life.

SIR RAYMOND UNWIN

An old friend writes:—

I had the honour of working with Sir Raymond Unwin for 30 years. Of his abilities and achievements others have spoken, but I want to put on record my considered view of his personality.

He was beyond question the most perfect character I have ever known in my life. In fact, he was as near to being a flawless character as could well be imagined.

Infinite charity and kindness, complete absence of the remotest trace of self-seeking or vanity, absolute devotion throughout his whole life to noble causes which he believed in with the fervour of a crusader, the quiet courage of a martyr—these were the qualities that shone in him with a quiet radiance that gave light and warmth to everyone with whom he came in contact. We shall not see his like again.

* * *

At the outbreak of war Sir Raymond Unwin was on the point of returning to England and had taken his passage when the British Ambassador urged him to remain in the United States, where his services were regarded as of special value to this country. He, therefore, cancelled his passage and continued his work until his fatal illness began.

Membership Lists

ELECTION: JULY 1940

The following candidates for membership were elected in July 1940 :—

AS FELLOWS (2)

HICKS : JOSEPH KENNETH, A.A.Dip. [*A.* 1932].
INMAN : GORDON HENRY NISBET [*A.* 1920].

AS ASSOCIATES (22)

BEDDINGTON : MISS NADINE DAGMAR.
BOUQUET : DAVID GILES, Eastbourne.
BRADLEY : KENNETH EATON, Manchester.
COWAN : RALPH, Edinburgh.
ELLIS : THOMAS BICKERSTAFF HARPER, Lancaster.
GIBB : MICHAEL CULLEN, B.A.(Cantab.), A.A.Dip., Tonbridge.
GILSON : MISS CAROLINE CARY, Oxford.
GOULD : ROY, Clacton-on-Sea.
HALL : GEORGE THOMAS.
HALL : HUMPHREY JOHN, Timaru, New Zealand.
HARRIS : LLEWELLYN HILEY, Durban, Natal.
MACKINTOSH : NORMAN GALPIN, Annandale, Sydney.
MASON : OWEN JOHN CURRIE.
MILLER : JOHN SINCLAIR, Harrogate.
NICOL : ROBERT ATHELSTANE, B.Arch.(N.Z.U.), Auckland, New Zealand.
THOMAS : ALUN AETHWY.
THOMAS : DEWI PRYS, Cardiff.
WARWICK : LIEUT. IAN FRANCIS, R.E.
WEIR : JOHN DAVID, Edinburgh.
WILSON : DAVID GORDON, Inverness.
WOOD : MISS OTTILIE CYNTHIA MARY.
YARROW : ALFRED RICHARD.

AS LICENTIATES (12)

BETHUNE-WILLIAMS : DENIS.
BOOTHROYD : CYRIL ALBERT, Rochdale.
COWE : JOHN GIBSON, Chester-le-Street.
GREENAWAY : BRAMWELL VICTOR.
HARRIS : FRANCIS ALBERT, Leeds.
HEY : JOHN AYRTON, Colne, Lancs.
KIMBER : LESLIE FRANK, Southampton.
MACDONALD : HARRY KERR, Lerwick.
PORTESS : JOHN EDWARD, Peterborough.
RICHARDSON : FREDERICK, Peterborough.
SHEPHERD : SIDNEY ERIC, F.S.I., Sheffield.
WALSH : FREDERIC JOHN, Wareham.

ELECTION: AUGUST 1940

The following candidates for membership were elected in August, 1940.

AS FELLOWS (6)

CHACKETT : Leslie Arthur [*A.* 1930].
FORBES : IAN [*A.* 1929].
HUGHES : JOHN, B.Arch.Lvpl. [*A.* 1931], Bowdon, Cheshire.
TOMLINSON : LAURENCE DIGBY [*A.* 1918].

And the following Licentiates who are qualified under Section IV, Clause 4 (*c*) (ii), of the Supplemental Charter of 1925 :—

DAVIES : GEORGE HENRY, Abergavenny, Mon.
YOUNGMAN : LIONEL STANLEY, Bournemouth.

AS ASSOCIATES (14)

BAILEY : WALTER, Bingley.
BASTO : MISS MARIE AUGUSTA DE CASTRO, Liverpool.
BENINGTON : PHILIP HUMPHREY, B.A., Salford.
BENINGTON : MISS PRUDENCE ELINOR MARY, B.A., Salford.
CHRISTIE : MAXWELL FORDYCE, Barnton, Midlothian.
LAWRENCE : FREDERICK, Newport, I.O.W.
LOBBAN : MISS ELIZABETH MARGARET KATHERINE, Lundin Links, Fife.
MILES : WILLIAM NAPIER MAURICE, Clevedon, Somerset.
PATRICK : THOMAS EDWARD, Edinburgh.
PURSER : ERIC OSWALD.
WALL : JOHN NORMAN.
WILSON : HERBERT CLIFTON.
WILSON : MISS MARGARET JOAN, Stretford.
WOODLEY : HAROLD, Liverpool.

AS LICENTIATES (10)

ARIS : BOYNTON BATEMAN GIFFORD, Salisbury.
BARCLAY : THOMAS, Glasgow.
DODD : ARTHUR, Leicester.
KERSHAW : SAM, Halifax.
MORGAN : ALBERT, Gloucester.
NOLAN : HERBERT GEORGE, Coventry.
OXENBURY : THOMAS BERNARD, Ipswich.
SCHOFIELD : HERBERT WALTER.
STEWART : REGINALD, Ulverston.
WEBBER : CHARLES, Paignton.

ELECTION: SEPTEMBER 1940

An election of candidates for membership will take place in September 1940. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Byelaws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Thursday, 29 August.

The names following the applicant's address are those of his proposers.

AS FELLOWS (2)

BUTLER : RONALD MCCONNAL [*A.* 1930], 31 Priory Street, Dudley ; 7 Priory Close, Dudley. A. T. Butler, Herbert Jackson and Reginald Edmonds.

And the following Licentiate who has passed the qualifying Examination :—

GALLANNAUGH : BERTRAM WILLIAM LEONARD, 3, 5 and 7 Old Queen Street, Westminster, S.W.1 ; 166 Foxley Lane, Purley, Surrey. W. Lee Clarke, Thomas S. Tait and Victor Heal.

AS ASSOCIATES (19)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

BAYNE : MISS ANNIE MARGARET [Edinburgh College of Art], 14 Merchiston Crescent, Edinburgh 10. Charles G. Soutar, P. H. Thoms and W. Salmond.

BUTLER : JOHN THOMAS [Welsh School of Architecture], 27 Oakfield Road, Newport, Mon. W. S. Purchon, J. Williamson and L. R. Gower.

DAYKIN : ALEC [University of Sheffield], 33 Brick Kiln Lane, Mansfield, Notts. Stephen Welsh, J. Mansell Jenkinson and H. B. Leighton.

EVERY : CHARLES HENRY [Bartlett School], Egginton, near Derby. L. Stuart Stanley, Prof. A. E. Richardson and applying for nomination by the Council under the provisions of Byelaw 3 (*d*).

FENNELL : THOMAS ELLIOTT [Univ. of Durham], 10 South Crescent, Fence Houses, Co. Durham. W. B. Edwards, Lt.-Col. A. K. Tasker and R. Norman Mackellar.

FIDELL : MISS MARGARET [Univ. of Durham], 6 Shaftesbury Avenue, Monkseaton, Northumberland. W. B. Edwards, Lt.-Col. A. K. Tasker and R. Norman Mackellar.

FOOTE : GEORGE EDWARD [Edinburgh College of Art], 19 South Lauder Road, Edinburgh 9. Alex. A. Foote, George D. Macniven and F. C. Mears.

GEDRYCH : THOMAS DAVID, Dip.Arch.(Cardiff) [Welsh School], 132 Lake Road East, Cardiff. W. S. Purchon, T. Alwyn Lloyd and Percy Thomas.

GWILLIAM : DENIS ARCHER [Welsh School], 26 Thompson Avenue, Cardiff. W. S. Purchon, J. Williamson and L. R. Gower.

HENDERSON : WILLIAM ANTHONY, B.Arch. [Univ. of Liverpool], 39 Markham Square, S.W.3. Prof. Lionel B. Budden, Prof. C. H. Reilly and Edward R. F. Cole.

HOOD : WILLIAM [Univ. of Durham], 20 Latimer Street, Tynemouth, Northumberland. W. B. Edwards, Percy L. Browne and C. A. Harding.

KENNEDY : KENNETH [Univ. of Durham], 23 Redcar Road, North Heaton, Newcastle-upon-Tyne 6. W. B. Edwards, C. A. Harding and F. N. Weightman.

MACKENZIE : CHARLES ROSS [Edinburgh College of Art], 29 Craigleith Drive, Edinburgh. Alex. A. Foote, George D. Macniven and F. C. Mears.

OXLEY : RALPH [Univ. of Sheffield], 274 Ecclesall Road South, Sheffield 11. Stephen Welsh, H. B. Leighton and J. Amory Teather.

PAYTON REID : MISS MARY LOUISA JEAN [Edinburgh College of Art], 24 Dick Place, Edinburgh. H. O. Tarbolton, Sir M. M. Ochterlony and B. N. H. Orphoot.

RENTON : ANDREW [Edinburgh College of Art], 18 New Row, Dunfermline. Alex. A. Foote, George D. Macniven and F. C. Mears.

RUSH : VINCENT JOHN [Victoria Univ., Manchester], 69 Johnson Road South, Tyldesley, near Manchester. Prof. R. A. Cordingley, C. Gustave Agate and Francis Jones.

SHORE : THOMAS GEORGE FREDERICK, Dip.Arch.(Liverpool) [Univ. of Liverpool], 3 Abbeystead Road, Liverpool, 15. Prof. Lionel B. Budden, Francis X. Velarde and Edward R. F. Cole.

SNOWDEN : AUSTYN GUY, Dip.Arch.(Leeds) [Leeds School of Architecture], "Hillmon," Tinshill Lane, Cookridge, Leeds. John C. Procter, F. L. Charlton and G. H. Foggitt.

ELECTION : NOVEMBER 1940

An election of candidates for membership will take place in November 1940. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Monday, 11 November 1940.

The names following the applicant's address are those of his proposers.

AS FELLOW (1)

The following Licentiate has passed the qualifying Examination :—

CONCANNON : THOMAS ARTHUR LAWRENCE, Public Works Department, Lagos, Nigeria. Herbert A. Welch, C. W. Box and Harold Greenwood.

AS ASSOCIATES (4)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

BODDIE : CHARLES WILLIAM [Special Final Examination], Bristol Hotel, Gibraltar. Cyril W. Lemmon, J. Nelson Meredith and applying for nomination by the Council under the provisions of Byelaw 3 (*d*).

HEUGH : PETER WILLIAM [Final], 4 Belmont Terrace, Port Elizabeth, South Africa. F. Owen Eaton, W. J. McWilliams and Victor T. Jones.

MANICKAM : THAMBUSWAMY JOSEPH, B.Sc. [Univ. of Liverpool], 298 Visweswarapuram, Bangalore City, India. Prof. Lionel B. Budden, Edward R. F. Cole and F. X. Velarde.

O'CONNOR : NOEL BOURCHIER [Passed a qualifying Examination approved by the Royal Australian Institute of Architects], 150 Clarendon Street, East Melbourne, C.2, Victoria, Australia. Leslie M. Perrott, Charles E. Serpell and Stanley T. Parkes.

Notices

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

The attention of members is also drawn to Counsel's opinion on the use of the affixes F., A. and L.R.I.B.A. by unregistered persons printed on page 190 of the June issue of the JOURNAL.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

BUILDING SURVEYING EXAMINATION

The R.I.B.A. Examination qualifying for candidature as Building Surveyor under Local Authorities will be held at the R.I.B.A. on 9, 10 and 11 October 1940. Applications for admission to the examination must be received not later than 9 September 1940.

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

Competitions

COMPETITION FOR DESIGN FOR PAVILION NATIONAL EISTEDDFOD OF WALES—COLWYN BAY, 1941

The Council of the National Eisteddfod offer prizes of £75 and £25 for competitive designs for a standardised pavilion to seat 12,000 with the necessary stage and other accommodation.

The intention is to encourage the planning and design of a modern type of building that can be taken down, transported and re-erected from year to year in various centres.

The Council of the National Eisteddfod have appointed as adjudicators Mr. Percy E. Thomas [*P.P.*] and Mr. T. Alwyn Lloyd [*F.*]. The conditions drawn up by them can be supplied to those who apply to the Secretary, Eisteddfod Office, Colwyn Bay.

INDUSTRIAL HOUSING COMPETITION

By the generosity of Mr. Bertram Baden the sum of £750 has been placed at the disposal of the Royal Institute for use as premiums in a competition associated with the prosecution of the war.

Full details were given on p. 211 of the July issue of the JOURNAL. Conditions are obtainable from the Secretary R.I.B.A., 66 Portland Place, London, W.1. Price 6d., post free. The last day for submitting designs is Tuesday, 27 August.

FORTHCOMING COMPETITION

WHITEHAVEN : NEW MUNICIPAL BUILDINGS

Assessor : Mr. J. C. Procter [*F.*] (Leeds).

COMPETITION RESULT

SHEFFIELD : NEW BUILDINGS FOR THE ROYAL SHEFFIELD INFIRMARY AND HOSPITAL

1. Messrs. Adams, Holden & Pearson [*FF.*] (London).
2. Messrs. Sir John Burnet, Tait & Lorne [*FF.*] (London).
3. Messrs. Stanley Hall & Easton and Robertson [*F.*] (London).

MEMBERS' COLUMN

PRACTICES

SUDDARDS & WALES, Chartered Architects, 19 High Street, Skipton-in-Craven. Mr. J. Howard Wales [*A.*], has been called up for service in H.M. Forces and his practice will be carried on for the duration of the war by his wife, Mrs. Mary Dorrien Wales [*A.*], at 47 Otley Street, Skipton. Telephone 12.

MR. RICHARD HENNIKER, M.A. [*A.*], is closing his office at 23 South Molton Lane, Davies Street, W.1, on 31 July as he is going on active service. After this date any necessary communications should be sent to him at "Carlinwark," Middleton Road, Camberley, Surrey. Messrs. Dyson & Hebeler [*AA.*] are also closing their office at 23 South Molton Lane, Davies Street, W.1, as from the same date and all communications should be sent to their office at 1 Scroope Terrace, Cambridge.

MR. ROBERT W. PATERSON [*A.*] is now conducting his practice at his home, 7 Tryes Road, Cheltenham (Tel. : Cheltenham 4341), having closed his office at Royal Chambers.

OFFICE ACCOMMODATION

A SMALL OFFICE is vacant in the Temple, facing South, with large cupboard accommodation in addition. Rent £35 p.a.—Apply Box 2220.

AN ARCHITECT is desirous of a fellow Architect sharing his office in the Temple. Rent inclusive, £35 p.a.—Apply Box 2320.

CHANGES OF ADDRESS

MR. JAMES H. A. BAKER [*A.*] has changed his address to Wellesley Hotel, 9 Knaresboro' Place, Earl's Court, S.W.5.

MR. E. H. LOCKTON [*A.*] has retired from the practice of Messrs. Mayell & Lockton by mutual consent as from 29 June 1940, owing to circumstances arising out of the war. The practice will henceforth be carried on alone by Mr. A. Y. Mayell [*F.*] at the same address, viz., St. James House, 173 Holland Park Avenue, W.11. Phone : Park 5010.

MR. JOHN MURRAY EASTON and Mr. Howard Robertson feel it desirable, in consequence of the death of their partner, Mr. Stanley Hall, to inform you that the practice will be carried on as before at this address under the same style and with the assistance of the same staff.

MESSRS. NORTH & PARTNERS [*L.*], have changed their address to 119 Park Street, London, W.1. Telephone : Mayfair 6514.